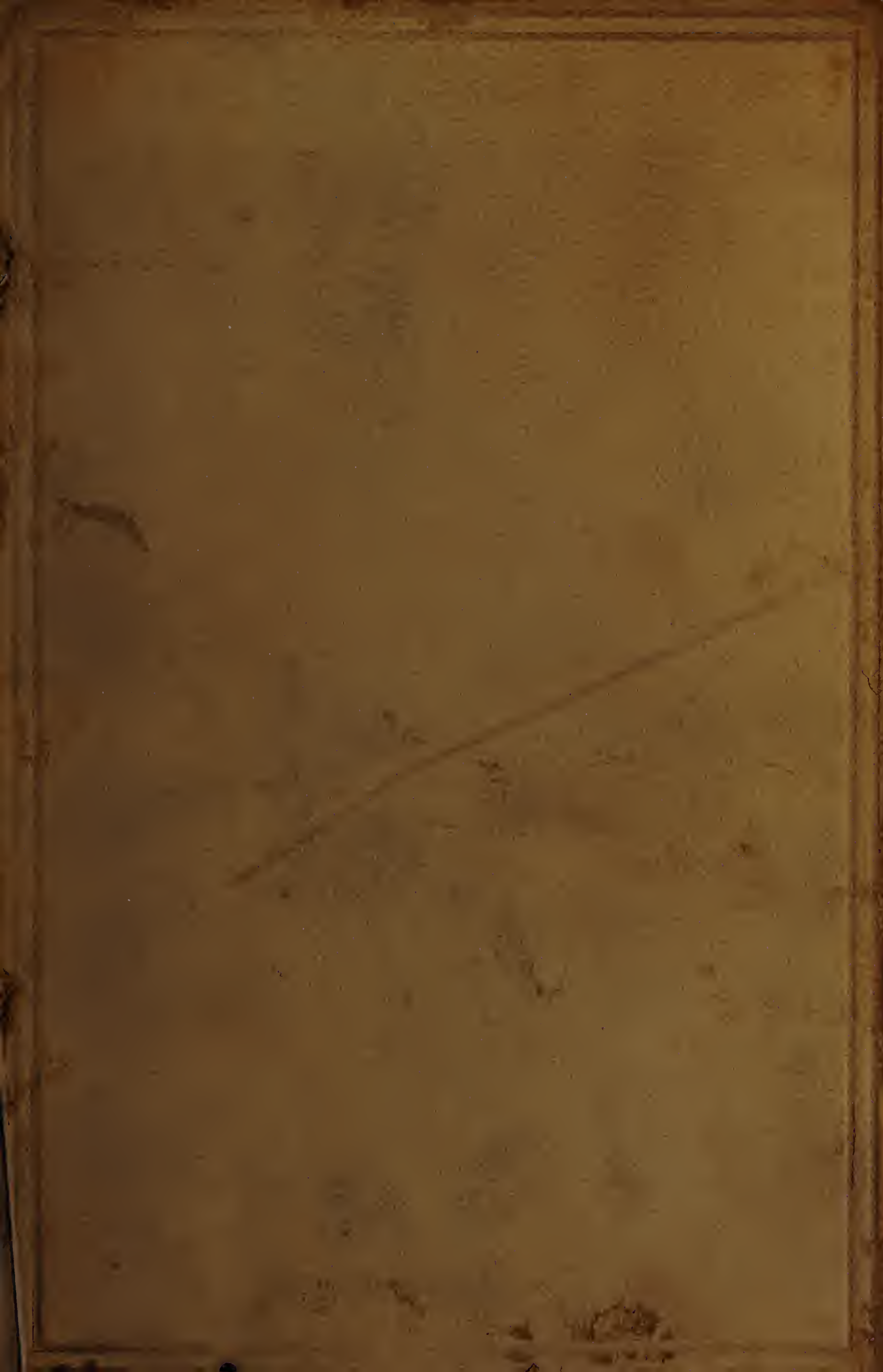




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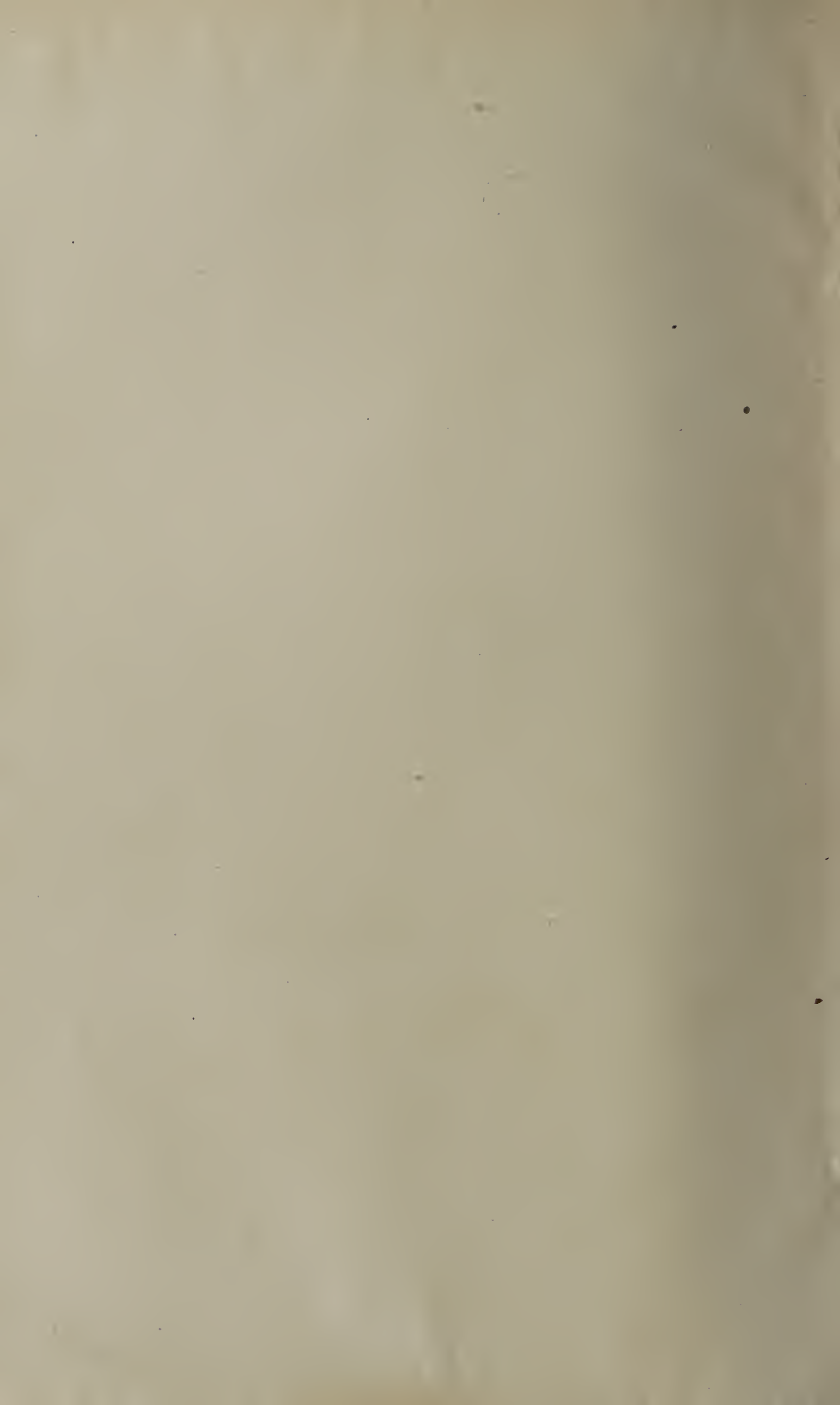


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DOCUMENTS
OF THE
CITY OF BOSTON,
FOR THE YEAR 1909.

IN FOUR VOLUMES.

VOLUME II.

CONTAINING DOCUMENTS FROM No. 20 TO No. 45, INCLUSIVE,

Published by Order of the City Council.



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1910

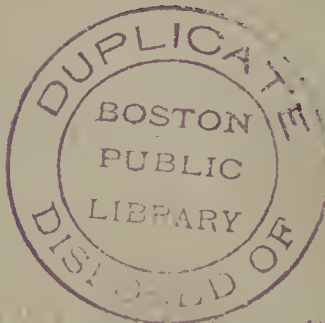
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CONTAINING CITY DOCUMENTS FROM No. 20 TO No. 45, INCLUSIVE.

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ANNUAL REPORT
OF THE
INSANE HOSPITAL DEPARTMENT

FOR THE YEAR ENDING JANUARY 31, 1909.

BOSTON, June 25, 1909.

HON. GEORGE A. HIBBARD,
Mayor of Boston:

DEAR SIR,— In accordance with the provisions of chapter 613 of the Acts of 1908, the Boston Insane Hospital, sometimes known as Austin and Pierce Farms, has been transferred to the state. A bill for this purpose was introduced in the Legislature of 1908 on the recommendation of your Honor. A report of the Finance Committee previously made public had advised that the Boston Insane Hospital should be placed under the direction of the state. In its report, the Finance Committee recommended that the state should take over the hospital on the grounds of "humanity and economy."

The Finance Committee doubtless meant the words in inverted commas in their broadest sense, and not at all as referring to the management of the hospital under the direction of the trustees. But as the words may be taken as referring directly to the management of the hospital, the Board of Trustees wish to point out that the hospital has been conducted on the most humane lines, and in the last years on more economic lines than any hospital in the state.

The reason of economy suggested by the Finance Committee grew out of the extraordinary condition of affairs under which the state paid the city \$3.25 for the maintenance of each patient at the Boston Insane Hospital who was a state charge; while it was at the same time paying at least \$4.50 per head for each patient in all the other insane hospitals in the state.

This arrangement was effected under section 2 of the Acts of 1900. Manifestly, under this arrangement the city was bound to lose money. But the city's position was still made harder in that the citizens of Boston were obliged to contribute about one-third of the total charge of maintaining all the other insane hospitals in the state.

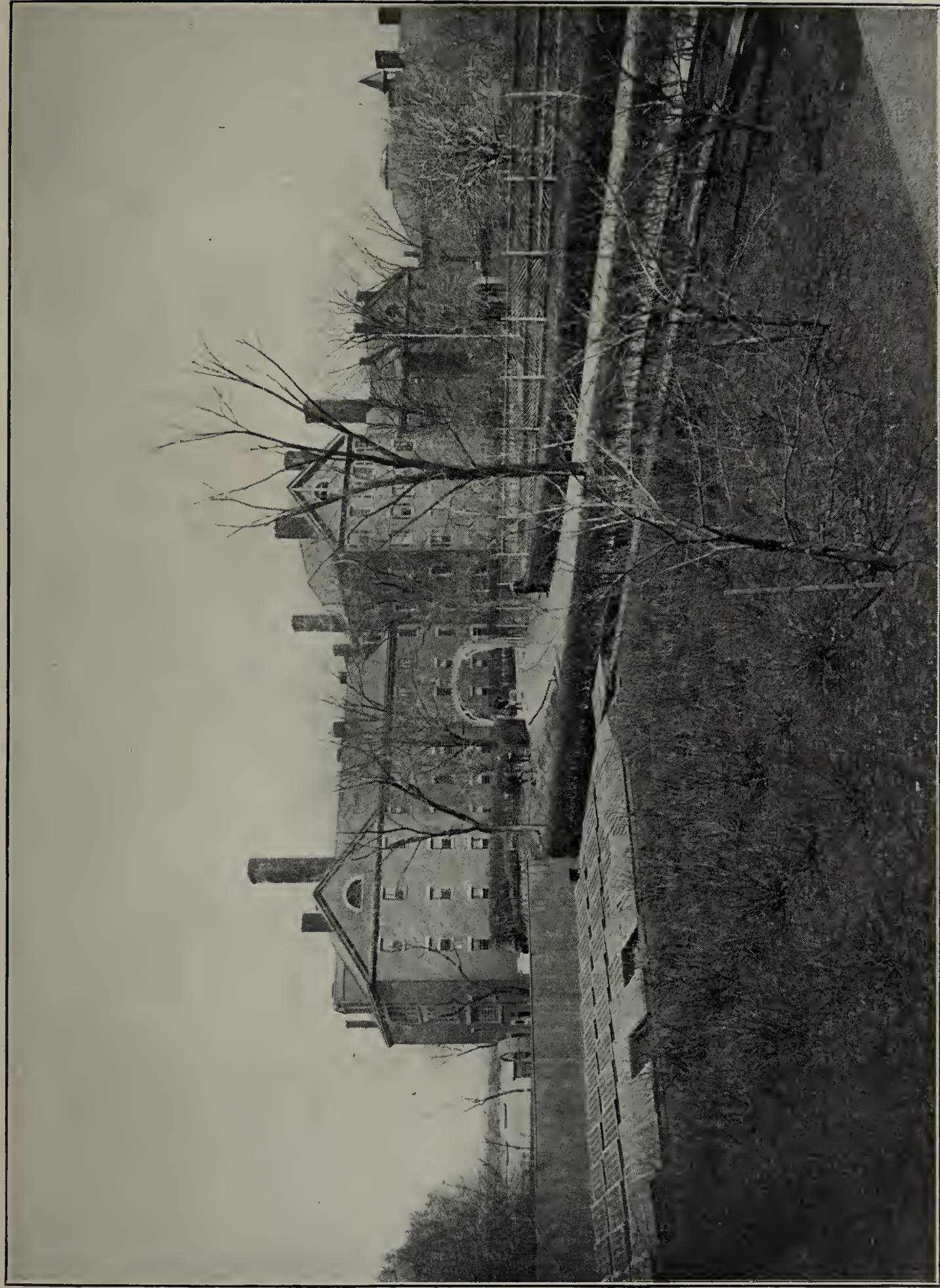
For these reasons, the trustees felt that it was in the financial interest of the citizens of Boston that the bill presented to the Legislature should become law.

The trustees also realized that a great advantage must come to the institution from being brought into closer touch with the State Board of Insanity. They are of opinion, however, that the same result might be accomplished without depriving the citizens of Boston of the direct management of this most important institution.

They therefore wish that their acquiescence in the provisions of the bill may be understood as dictated by the financial methods under which the state provided for the maintenance of state patients in the hospital, and not in any sense as an abandonment of the principle that the city is the proper authority to provide for all the needs of its own citizens.

The work of attendants at the hospital is extremely disagreeable. It is a matter of much importance that the pay of attendants, both men and women, should be placed on such a substantial basis as would attract men and women to the hospital service who had the best qualifications for the work.

The Board wishes to make it a matter of public record that they were not consulted concerning the value of the hospital property taken by the state under the act above quoted, and that they knew nothing of the arrangements made by the city and state until so informed in your Honor's office at a meeting held there on May 20. The members of the Board present at that meeting did not consider the price to be paid by the state to the city for the hospital, namely one million dollars, to be adequate. In our letter to your



BOSTON LUNATIC HOSPITAL, SOUTH BOSTON, 1839,

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Honor dated May 26, 1909, I pointed out that it was the unanimous opinion of the Board that the property was worth from one-quarter to one-half million dollars more than the price offered.

Very truly yours,

MICHAEL J. JORDAN.
GEO. A. SANDERSON.
C. JAMES CONNELLY.
MICHAEL S. MORTON.
AGNES C. BULGER.
CHARLES L. COONEY.
MARY T. MORRISON.

MAILED
JUN 1 1909

REPORT OF THE SUPERINTENDENT.

To the Trustees of the Boston Insane Hospital:

The seventieth annual report of the year ended January 31, 1909, is herewith respectfully submitted.

The movement of population for the calendar year is given in the following table:

	Males.	Females.	Total.
Patients in hospital January 1, 1908,	303	427	730
Patients on visit January 1, 1908	33	73	106
Total on books January 1, 1908	336	500	836
Admitted within the year	146	232	378
Committed	119	186	305
Emergency	23	34	57
Voluntary	1	10	11
By transfer from other hospitals	3	2	5
Whole number of cases during the year	482	732	1,214
Discharged during the year	140	216	356
Recovered	7	27	34
Capable of self-support	11	7	18
Improved	16	37	53
Not improved	8	26	34
Died	53	69	122
Transferred to other hospitals	45	50	95
Remaining in hospital January 1, 1909	308	432	740
On visit January 1, 1909	34	84	118
Total on books January 1, 1909	342	516	858
Daily average in hospital	319.64	462.54	782.18
Supported by friends	31	71	102
Supported by the state	277	361	638
Average age at death		60.52	

Cases admitted during the year who had not a Boston settlement:

	Males.	Females.	Total.
Committed	16	23	39
Emergency	8	10	18
Total	24	33	57

As in the report of the previous year the comments that follow are based on the above table, while the statistical



MEN'S DEPARTMENT IN 1896.

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tables at the end of this report are made up for the year ending September 30, 1908.

The admissions for the year were 378, 146 men and 232 women, as against 157 men and 213 women, total 370, admitted last year, making a total of eight more admissions than last year. The commitments this year were 305; last year 306. The emergency admissions were 57; last year 54. Of these emergency admissions 23 were men and 34 were women. Of these 57 emergency admissions 8 men and 10 women, 18 in all, were state cases, while 15 men and 24 women, 39 in all, had Boston settlements. Of the cases regularly committed, 16 men and 23 women, 39 in all, had no Boston settlement. Thus 18 emergency cases and 39 committed cases, making a total of 57, or 15.07 per cent of the whole number of admissions, had no Boston settlement. The number of cases recorded as recovered was 34; last year 23.

The extension of the time of trial visit from sixty days to six months, referred to last year, still continues to give good satisfaction. The patients have a longer time to adjust themselves to the home conditions, and their friends become accustomed to them and make more allowances for them.

The daily average population was 782.18 as compared with 734 last year, and 701 the year before that. The increase was chiefly among the women, the daily average this year being 462.54; last year 426.85; the daily average of men this year was 319.64; last year 307.64. The deaths during the year were 122, which is 10.05 per cent of the whole number treated, and 15.59 per cent of the daily average population.

The general health of the patients during the year has been good, and there has been no epidemic. There have been no additions to the plant during the year.

The appropriation for the support of the institution was \$165,000, of which only \$160,938.45 was actually expended, but this includes salaries and pay rolls for eleven and one-half months, the Commonwealth having paid the salaries and wages from December 1 to December 15, amounting to \$2,929.89, so that twelve full months' expenditures would be \$163,868.35.

As this is the last report of the hospital that will be issued as a city document, it has seemed appropriate to compile the following brief summary of the hospital's history since its incorporation.

1837. The Boston Lunatic Hospital was incorporated on the recommendation of a committee of the city government, of which Mayor Eliot was chairman.

1839. The hospital, consisting of a center and two short wings, was completed. It was located midway between the House of Industry and the Suffolk County House of Correction, South Boston. It contained seventy-two single rooms, each 8 feet by 12 feet, with the wards in each wing.

In October Dr. John S. Butler was appointed physician to the city institutions and superintendent of the hospital.

1842. Dr. Butler resigned, and Dr. Charles H. Stedman appointed superintendent.

1851. Dr. Stedman resigned, and Dr. Clement A. Walker appointed superintendent July 1.

1881. Dr. Walker resigned, and Dr. Theodore W. Fisher appointed superintendent.

1884. Eighty-four patients sent to Austin Farm, which was organized independently under the name of "Retreat for the Insane," Dr. Fred J. McNulty, superintendent.

1889. The "Retreat" made a department of the hospital, Dr. Edward B. Lane, assistant in charge.

1892. Site of Pierce Farm purchased in October.

1893. New building at Austin Farm first occupied in January (Ward B).

1895. All the patients in the hospital at South Boston transferred to the new buildings at Pierce Farm. The transfer was made on the 15th and 16th of April. On August 5 Austin Farm and Pierce Farm were made independent units, Dr. Fisher administering Pierce Farm and Dr. Lane being made superintendent of Austin Farm.

November 1 Dr. Fisher resigned.

1896. Dr. William Noyes appointed superintendent of Pierce Farm on March 29.

1897. The form of government of the hospital changed by the Legislature and instead of being under the control of a Commission of Public Institutions was placed in a Board of seven trustees appointed by the Mayor. Name changed to Boston Insane Hospital.

1898. The two hospitals at Austin and Pierce Farms consolidated under one superintendent, Dr. Edward B. Lane, for administrative purposes. The name Austin Farm changed to Department of Women, and Pierce Farm to Department for Men.

1904. Stedman, Walker and Butler wards opened at the Women's Department in October.

1905. Dr. Edward B. Lane resigned; Dr. William Noyes appointed superintendent.

1908. On December 1 the hospital passed under the



Ward B.

Chapel.

WOMEN'S DEPARTMENT.

Nurses' Home.

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control of the Commonwealth, and to be called hereafter the Boston State Hospital.

During the year Dr. William P. Bolles, one of the consulting surgeons, resigned, but the consulting staff remains otherwise unchanged.

My thanks are due the medical staff for their faithful services and cordial co-operation.

To your Board I desire to express my thanks and appreciation of the kindness and consideration shown me during the year.

Respectfully submitted,

WILLIAM NOYES,
Superintendent.

REPORT OF THE TRAINING SCHOOL FOR NURSES.

To the Superintendent of the Boston Insane Hospital:

The ninth annual report of the Training School for Nurses is herewith respectfully submitted:

GRADUATING CLASS OF 1908.

Isabella Allardice,	Laurie E. W. Hyson,
Pearl E. Brooks,	Jane A. Irvine,
Helen G. Cavanagh,	Grace F. Potter,
Delia J. Delaney,	Edna J. Ritchie.

NURSING STAFF.

Superintendent of Nurses and Matron	1
Assistant Superintendent of Nurses (graduate)	1
Head nurses, day (graduates)	6
Head nurses, night (graduate)	1
Nurses, night (graduates)	2
Nurses, day (graduates)	8
Graduates of other schools	2
Pupils, night	3
Attendants, night	4
Attendants, day	15
Probationers	2

Applicants during the year	216
Applicants accepted	48
Probationers accepted as pupils	12
Pupils left	4
Probationers rejected	7

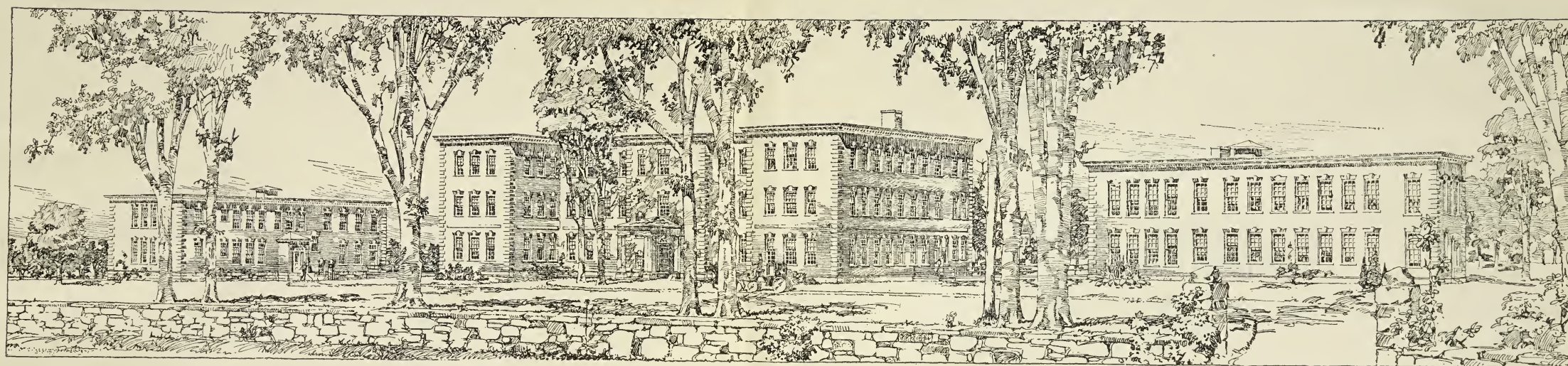
The Training School has graduated eight nurses during the year, making a total of fifty-four nurses since it was organized. Ten of our graduates have left during the year, six of whom have entered other hospitals for a post-graduate course, and four are doing private nursing.

The course of instruction has been improved from year to year since the organization of the school, and the interest correspondingly increased. The course of lectures extends from October to the first of May, with reviews and examinations in February and May.

The following subjects are covered:

Junior year.—Bones, joints, muscles, digestion, circulation, histology, secretion, bandaging, bacteriology, pathology, diseases of the bones, fractures and dislocations, skin, urinary

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Butler Ward.

Stedman Ward.

Walker Ward.

WOMEN'S DEPARTMENT.

tract, respiratory tract, hemorrhages, hygiene, chemistry, and clinical instruction.

Senior year.—Tuberculosis, emergencies, sepsis, asepsis, antisepsis, surgical dressings, materia medica, gynecology, obstetrics, immunity, and serum theraphy, acute infectious diseases, symptomatology, anatomy and physiology of the nervous system, psychiatry, massage, cooking and clinical instruction.

We again wish to express our appreciation for the assistance rendered by the consulting staff and Dr. Linneus A. Roberts, who have given courses during the year, also to the resident staff for their interest in the promotion of the work.

Respectfully submitted,

JANE ROBERTSON,
Superintendent of Nurses.

CLASSIFIED EXPENDITURES FOR 1908-1909.

Amount of appropriation	\$165,000 00
Revenue	25 00
	\$165,025 00
Amount unexpended	4,086 54
Amount expended	<u>\$160,938 46</u>
Salaries and wages	\$67,897 12
Food	39,444 22
Clothing	4,197 71
Bedding	3,375 84
Fuel	23,266 97
Light	145 12
Medical supplies	1,331 81
Furniture, upholstery and utensils	2,440 25
Household supplies	1,066 40
Agricultural (farm, garden, live stock, stable and grounds)	9,387 07
Religious services	1,069 01
Training school	61 75
Entertainment of patients	578 06
Library supplies	79 65
Telephone and telegraph	271 91
Tobacco and snuff	630 44
Laundry supplies	990 69
Postage	158 84
Office books and stationery	237 70
Printing	278 59
Repairs and improvements	2,402 20
Transportation	106 59
Others as they may arise	1,520 52
Total	<u>\$160,938 46</u>

INCOME.

From Commonwealth for board of patients (nine months)	\$85,249 83
From private patients (eleven months)	21,026 13
From material sold, etc. (eleven months)	194 01
Total	<u>\$106,469 97</u>

Daily average number of patients	780.74
Gross weekly per capita cost (based on full expenses for twelve months)	\$4 025

GARDEN PRODUCTS.

Apples	Bushels	92	\$46 00
Asparagus	Bunches	590	73 75
Beans, shell	Bushels	37	27 75
Beans, string	"	122	61 00
Beets, table	"	275	110 00
Beets	Bunches	420	8 40
Beet greens	Bushels	133	33 25
Cabbage	Heads	3,917	117 51
Carrots	Bushels	325	162 50
Cauliflower	Heads	1,114	55 70
Celery	"	7,109	248 81
Corn, sweet	Dozen	1,979	237 48
Cress	Bunches	53	1 59
Cucumbers, large		2,808	28 08
Dandelions	Bushels	81	20 25
Kale	"	238	59 50
Kohl-rabi	"	45	22 50
Lettuce	Heads	15,350	153 50
Mint	Bunches	35	70
Musk melons		630	31 50
Mustard greens	Bushels	15	3 75
Onions	"	160	96 00
"	Bunches	13	13
Parsley	"	139	70
Parsnips	Bushels	350	210 00
Peas	"	138	172 50
Peppergrass	Bunches	32	16
Peppers	Bushels	2 $\frac{1}{2}$	1 25
Potatoes	"	1,660	1,245 00
Pumpkins	Pounds	250	1 88
Radishes	Bunches	444	4 44
Rhubarb	Pounds	8,139	61 04
Spinach	Bushels	370	92 50
Squash, summer	Pounds	2,985	22 39
" winter	"	23,000	172 50
Tomatoes	Bushels	208	156 00
" green	"	20	7 00
Turnips, white	"	386	154 40
" ruta-baga	"	175	70 00
Blackberries	Boxes	420	42 00
Currants	"	358	35 80
Grapes	Pounds	2,070	41 40
Pears	Bushels	33	33 00
Raspberries	Boxes	50	7 50
Strawberries	"	2,844	227 52

Total \$4,358 63

FARM PRODUCTS.

Corn, field	Bushels	220	\$110 00
Ensilage	Tons	200	900 00
Fodder, green	"	168	856 00
" dry	"	2	24 00
Hay, English	"	165	3,630 00
" meadow	"	22	220 00
" second crop	"	6	90 00
Mangel-wurzel	"	29 $\frac{1}{2}$	132 75
Potatoes, small	Bushels	110	11 00
Beef (eleven months)	Pounds	5,780	375 70
Tallow (eleven months))			16 76
Hides (eleven months))			
Calves (eleven months)			53 00
Milk (eleven months)	Cans	22,579	9,031 60
Pork (eleven months)	Pounds	21,704	1,736 32
Ice	Tons	700	1,400 00
Total			<u>\$18,587 13</u>
Garden products			\$4,358 63
Farm products			18,587 13
Total			<u>\$22,945 76</u>

1. GENERAL STATISTICS OF THE YEAR.

	Males.	Females.	Total.
Patients in hospital October 1, 1907.....	333	427	760
Admitted within the year.....	175	302	477
†By commitment*.....	147	235	382
By transfer.....	3	4	7
From visit†.....	25	63	88
Whole number of cases within the year.....	508	729	1,237
Dismissed within the year.....	180	243	423
Discharged.....	40	90	130
As recovered.....	6	22	28
As capable of self-support.....	12	8	20
As improved.....	14	35	49
As not improved.....	8	25	33
Died.....	54	73	127
Transferred.....	52	10	62
On visit October 1, 1908.....	34	70	104
Patients remaining September 30, 1908.....	328	486	814
Supported as state patients.....	292	390	682
Supported as private patients.....	30	85	115
Supported as reimbursing patients.....	6	11	17
Number of different persons within the year....	487	680	1,167
Number of different persons admitted.....	156	254	410
Number of different persons admitted by commitment.....	147	235	382
Number of different persons dismissed.....	161	195	356
Number of different persons recovered.....	6	22	28
Number of different persons discharged as capable of self-support.....	12	8	20

Daily average number of patients, viz.: State, 647.11; reimbursing, 19.79; private, 106.8; total, 773.7.

* Includes 53 emergency cases, 48 of which were committed to this hospital, 3 to other hospitals and 2 discharged.

† Includes emergency and voluntary insane cases.

‡ Includes 19 males and 48 females absent on visit at beginning of year and nominally admitted for discharge.

2. INSANE RECEIVED ON FIRST AND SUBSEQUENT COMMITMENTS.

NUMBER OF COMMITMENT.	CASES COMMITTED.		
	Males.	Females.	Total.
First to this hospital.....	127	201	328
Second to this hospital.....	13	24	37
Third to this hospital.....	6	6	12
Fourth to this hospital.....	.....	3	3
Fifth to any hospital.....	.....	1	1
Sixth to any hospital.....	1	.....	1
Total cases	147	235	382
Total persons.....	147	235	382
Never before in any hospital for insane.....	121	189	310

3. NATIVITY AND PARENTAGE OF INSANE PERSONS FIRST ADMITTED TO ANY HOSPITAL.

PLACE OF NATIVITY.	MALES.			FEMALES.			TOTAL.		
	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.
Massachusetts ...	68	22	24	60	19	23	128	41	47
Other New Eng- land States....	6	10	11	15	10	10	21	20	21
Other states	6	5	3	9	9	8	15	14	11
Total native.	80	37	38	84	38	41	164	75	79
Other countries:									
At sea				1			1		
Austria	1	1	1				1	1	1
Canada	7	10	11	16	20	15	23	30	26
East Indies....					1			1	
England	4	4	4	6	10	8	10	14	12
Finland				1	1	1	1	1	1
Germany	4	8	6	1	3	3	5	11	9
Ireland	17	44	45	62	92	99	79	136	144
Italy	4	4	4	2	2	2	6	6	6
Newfoundland.				2	2	1	2	2	1
Norway				1	1	1	1	1	1
Russia	1	1	1	4	5	4	5	6	5
Scotland	1	2	2	4	5	3	5	7	5
Spain		1	1					1	1
Sweden	1	2	1	2	2	2	3	4	3
Switzerland ...						1			1
Turkey						1			1
Wales				1	1	1	1	1	1
West Indies...				1	1	1	1	1	1
Total foreign,	40	77	76	104	146	143	144	223	219
Total native.	80	37	38	84	38	41	164	75	79
Unknown ...	1	7	7	1	5	5	2	12	12
Total	121	121	121	189	189	189	310	310	310

4. RESIDENCE OF INSANE PERSONS ADMITTED BY COMMITMENT.

PLACES.	FIRST ADMITTED TO ANY HOSPITAL.			OTHER ADMISSIONS.			TOTAL.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total
Massachusetts:									
Suffolk County.....	121	187	308	25	46	71	146	233	379
Middlesex County.....	.....	1	1	.....	.....	.....	.....	1	1
Total resident.....	121	188	309	25	46	71	146	234	380
Austria.....	.....	.....	.....	1	.....	1	1	.....	1
Maine.....	.....	1	1	.....	.....	.....	.....	1	1
Total nonresident.....	.....	1	1	1	.....	1	1	1	2
Total cases.....	121	189	310	26	46	72	147	235	382
Cites or towns 10,000 or over.....	121	189	310	25	46	71	146	235	381
County districts under 10,000.....	.....	.....	.....	1	.....	1	1	.....	1

5. CIVIL CONDITION OF INSANE PERSONS FIRST ADMITTED TO ANY HOSPITAL.

	Males.	Females.	Total.
Unmarried.....	56	65	121
Married.....	58	72	130
Widowed.....	7	49	56
Divorced.....	.....	3	3
Total.....	121	189	310

6. OCCUPATION OF INSANE PERSONS FIRST ADMITTED
TO ANY HOSPITAL.

Males.

Agents	2	Machinists	2
Blacksmith	1	Messenger boy	1
Brass finisher	1	Musician	1
Carpenters	7	Painters	2
Clerks	8	Piano tuner	1
Cooks	4	Plumbers	2
Cutter	1	Printers	2
Conductor	1	Roofer	1
Electricians	2	Sailor	1
Engineer	1	Shoemaker	1
Florist	1	Stonemason	1
Harnessmaker	1	Storekeepers	5
Inventor	1	Tailor	1
Junk dealer	1	Teamsters	12
Laborers	21	Telegrapher	1
Liquor dealers	2	Tinsmith	1
Lawyers	2	Waiters	3
Laundryman	1	None	22
Longshoreman	1		
Letter carriers	2		121

Females.

Bookkeepers	4	Lodging house keepers	3
Clerks	2	Peddler	1
Collector	1	Salesgirls	3
Cooks	5	Tailoress	1
Domestics	15	Teacher	1
Dressmakers	5	Waitresses	2
Embroiderer	1	None	59
Factory girls	7		
Housewives	77		189
Laundresses	2		

7. AGES OF INSANE AT FIRST ATTACK, ADMISSION AND DEATH.

AGES.	FIRST ADMITTED TO ANY HOSPITAL.			DIED.		
	AT FIRST ATTACK.		WHEN ADMITTED.	AT FIRST ATTACK.		AT TIME OF DEATH.
	Males.	Females.		Males.	Females.	
Congenital.....	12	7	.....	1	1	.....
15 years or less.....	1	2	.....	.....	.....	.....
From 15 to 20 years.....	6	6	.....	.....	.....	.....
“ 20 to 25 “.....	4	14	6	.....	.....	.....
“ 25 to 30 “.....	10	15	10	.....	.....	.....
“ 30 to 35 “.....	11	21	14	2	4	.....
“ 35 to 40 “.....	13	21	10	2	4	.....
“ 40 to 50 “.....	23	28	14	6	4	.....
“ 50 to 60 “.....	17	23	28	5	3	.....
“ 60 to 70 “.....	15	27	21	10	10	.....
“ 70 to 80 “.....	4	15	12	10	19	.....
Over 80 years.. ..	3	8	6	6	20	.....
Total.....	119	187	3	2	7	.....
Unknown.....	2	2	121	54	73	.....
Total number of persons.....	121	189	.....	125	.....	.....
Mean known ages.....	42.12	45.82	310	54	73	.....
			44.02	52.98	61.22	.....
			45.86	54.08	57.97	.....

8. PROBABLE CAUSE OF MENTAL DISEASE IN PERSONS
FIRST ADMITTED TO ANY HOSPITAL.

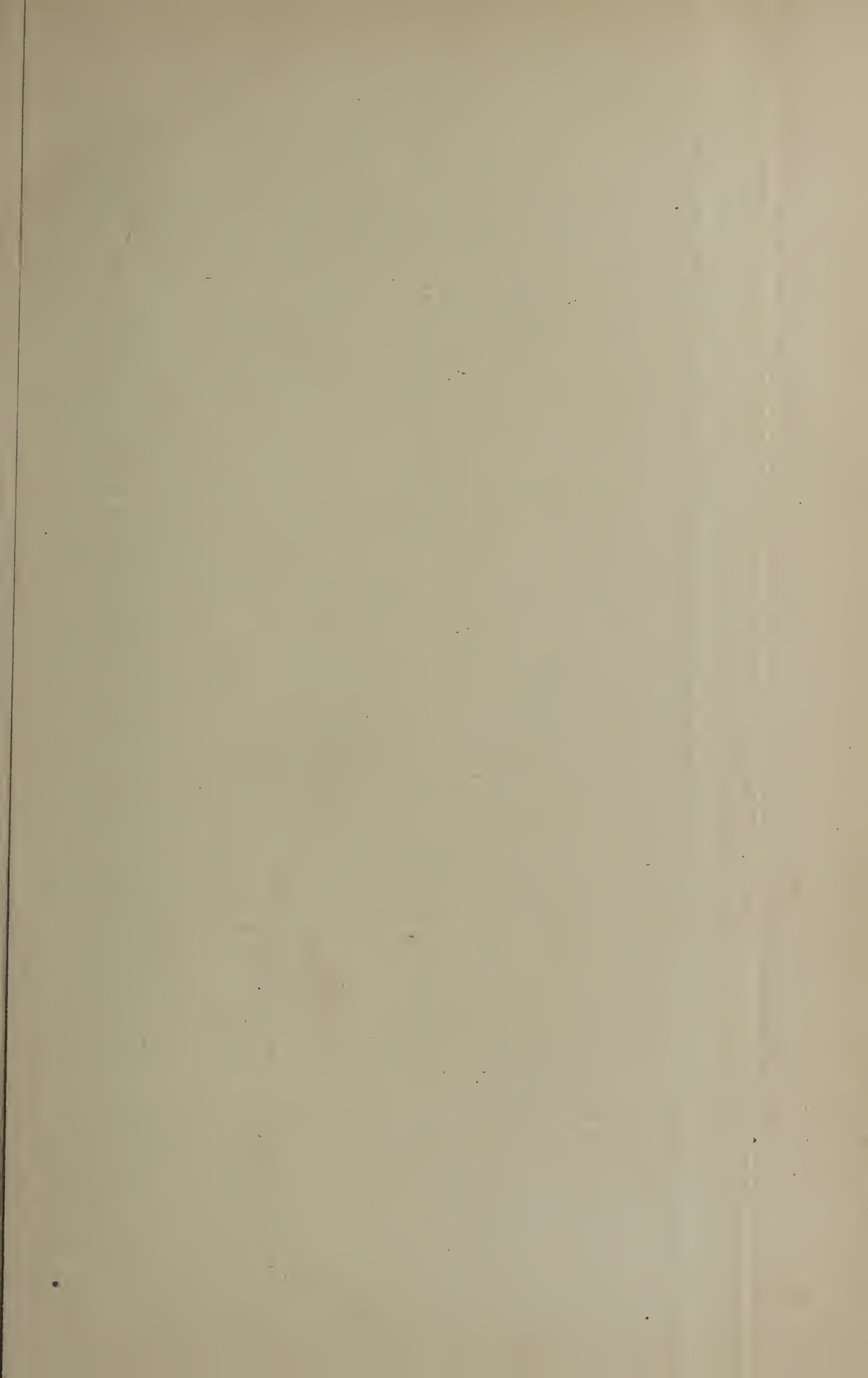
EXCITING CAUSES.	ADMITTED.			PREDISPOSING CAUSES.								
				HEREDITARY TENDENCY.			NEUROTIC TENDENCY.			INTEMPERANCE.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Apoplexy.....	3	10	13	...	1	1	...	...	...	...	1	1
Childbirth.....	...	5	5	...	1	1	...	...	...	...	...	...
Congenital.....	12	4	16	1	1	2	...	...	...	...	...	...
Drug habit.....	1	...	1	...	...	...	...	...	...	...	...	...
Epilepsy.....	4	5	9	...	...	...	...	...	...	...	...	...
Grief.....	...	1	1	...	...	...	...	...	...	...	...	...
Ill health.....	3	5	8	...	...	...	...	...	...	...	...	...
Injury.....	1	...	1	...	...	...	...	...	...	...	...	...
Intemperance.....	9	19	28	...	2	2	...	3	3	9	19	28
Menopause.....	...	21	21	...	1	1	...	2	2	...	...	...
Myxedema.....	...	1	1	...	...	...	...	...	...	...	...	...
Overstudy.....	...	1	1	...	...	...	...	1	1	...	...	...
Overwork.....	1	...	1	...	...	...	...	...	...	...	...	...
Senility.....	13	40	53	...	3	3	...	...	...	...	2	2
Syphilis.....	3	1	4	...	...	...	...	...	...	...	...	...
Worry.....	...	5	5	...	1	1	...	3	3	...	...	...
Total.....	50	118	168	1	10	11	...	9	9	9	22	31
Unknown.....	71	71	142	4	22	26	5	12	17	...	1	1
Total.....	121	189	310	5	32	37	5	21	26	9	23	32

9. PROBABLE DURATION OF MENTAL DISEASE BEFORE
ADMISSION.

PREVIOUS DURATION.	FIRST ADMITTED TO ANY HOSPITAL.		
	Males.	Females.	Total.
Congenital.....	12	7	19
Less than a month.....	20	34	54
From 1 to 3 months.....	19	25	44
“ 3 to 6 “	15	30	45
“ 6 to 12 “	19	18	37
“ 1 to 2 years	16	23	39
“ 2 to 5 “	12	27	39
“ 5 to 10 “	2	12	14
“ 10 to 20 “	1	12	13
Total.....	116	188	304
Unknown.....	5	1	6
Total.....	121	189	310
Average known duration in years.....	1.15	1.88	1.52

10. FORM OF MENTAL DISEASE IN PATIENTS COMMITTED OR DISCHARGED, ETC. — *Concluded.*

FORM OF DISEASE.	COMMITTED.			DISCHARGED.												AGGREGATE.		
	Males.	Females.	Total.	RECOVERED.			CAPABLE OF SELF-SUPPORT.			IMPROVED.			NOT IMPROVED.			DIED.		
				Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
(b.) Other admissions:																		
Manic-depressive insanity	3	22	25	1	7	8	2	1	3	1	3	4				4	14	18
Dementia præcox	12	6	18				4		4		2	2		3	6	7	11	18
“ senile		2	2								1	1			2		3	3
Confusional insanity, acute		1	1											1			1	1
Delirium, acute		1	1														1	1
Involution melancholia	3	5	8					1	1					1	1		3	3
Epileptic insanity	1	1	2															
General paresis	1	2	3															
Paranoia		2	2								1	1					4	4
Alcoholic insanity, acute		4	4															
“ chronic	5		5							1	1	2		1		2	1	3
Imbecility	1		1									1		1	1	1	1	2
Total (b.)	26	46	72	1	7	8	6	2	8	2	8	10	1	10	11	4	16	20
Aggregate cases	147	235	382	6	22	28	12	8	20	14	35	49	8	25	33	54	73	127
Aggregate persons	147	235	382	6	22	28	12	8	20	14	35	49	8	24	32	54	73	127



12. CAUSE OF DEATH AND FORM OF MENTAL DISEASE IN PERSONS WHO DIED.

Cause.	Aggregate.			Manic-Depressive Insanity.			Dementia Praecox.			Organic Dementia.			Senile Dementia.			Acute Confusional Insanity.			Acute Delirium.			Imbecility.			Involution Melancholia.			General Paresis.			Paranoia.			Epileptic Insanity.			Acute Alcoholic Insanity.			Chronic Alcoholic Insanity.			Myxedematous Insanity.			Somatic Disease Psychosis.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.						
General Diseases:																																																
Diabetes mellitus.....		1	1										1	1																																		
Myxedema.....	1	1	2																																													
Septic cellulitis of hand.....		1	1										1	1																																		
Septic parotitis.....		1	1		1	1																																										
Nervous System:																																																
Cerebral tumor.....		1	1																		1	1																										
Exhaustion of involution melancholia.....		1	1																																													
Exhaustion of manic-depressive insanity.....		2	2		2	2																																										
General paresis.....	18	11	29																																													
Circulatory System:																																																
Arterio sclerosis.....	3		3							3		3																																				
Cerebral hemorrhage.....	4	13	17							2	5	7	1	8	9											1		1																				
Multiple thrombosis.....		1	1															1	1																													
Organic heart disease.....	13	5	18	1		1	2	1	3				8	2	10			1	1								1	1																				
Respiratory System:																																																
Broncho pneumonia.....	1	1	2										1	1													1		1																			
Hypostatic pneumonia.....	3	5	8		2	2						3	1	4												2	2																					
Lobar pneumonia.....		4	4										4	4																																		
Pulmonary tuberculosis.....	8	11	19	1		1	5	6	11				1	1						1		1				1	1																					
Digestive System:																																																
Acute enteritis.....	2	9	11		3	3							2	6	8																																	
Acute pancreatitis.....		1	1																								1	1																				
Carcinoma of stomach.....	1		1										1		1																																	
Cirrhosis of liver.....		1	1										1	1																																		
Intestinal obstruction.....		1	1										1	1																																		
Genito-Urinary System:																																																
Chronic nephritis.....		2	2										1	1														1	1																			
Total.....	54	73	127	2	8	10	7	7	14	5	5	10	15	28	43		1	1		1	1	2		4	4	19	11	30		4	4	1		1		2	2	1		1		3		3				

11. DISCHARGES OF THE INSANE CLASSIFIED BY ADMISSION AND RESULT.

NUMBER OF THE ADMISSION.	RECOVERED.			CAPABLE OF SELF-SUPPORT.			IMPROVED.			NOT IMPROVED.			DIED.			TOTAL.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
First.....	5	15	20	7	6	13	12	30	42	8	19	27	50	66	116	82	136	218
Second.....	1	4	5	4	2	6	2	2	4	....	6	6	4	6	10	11	20	31
Third.....	....	3	3	....	....	....	....	1	1	....	....	....	....	1	1	....	5	5
Fourth.....	....	....	....	....	....	....	....	2	2	....	....	....	....	....	....	....	2	2
Eighth.....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1
Total.....	6	22	28	12	8	20	14	35	49	8	25	33	54	73	127	94	163	257
First admitted to any hospital.....	5	15	20	6	6	12	12	27	39	7	15	22	50	57	107	80	120	200

13. DURATION OF MENTAL DISEASE AND ITS TREATMENT IN PERSONS WHO RECOVERED OR DIED.

PERIOD.	FIRST ADMITTED TO ANY HOSPITAL.						ALL OTHER ADMISSIONS.					
	DURATION BEFORE ADMISSION.			HOSPITAL RESIDENCE.			WHOLE DURATION.			WHOLE KNOWN PERIOD OF MENTAL DISEASE.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Recovered:												
Under 1 month.....	4	8	12	4	5	9	3	3	6	.....	.....	.....
From 1 to 3 months.....	.....	4	4	.....	5	5	1	3	4	.....	.....	.....
" 3 to 6 ".....	.....	2	2	.....	4	4	.....	5	5	.....	.....	.....
" 6 to 12 ".....	.....	.....	.....	1	1	2	.....	3	3	1	2	3
" 1 to 2 years.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
" 2 to 5 ".....	1	.....	1	.....	.....	.....	1	1	2	.....	4	4
Totals.....	5	15	20	5	15	20	5	15	20	1	7	8
Average of known cases in months.....	12.4	2.63	7.51	1.8	2.78	2.29	13.8	5.41	9.6	6.0	22.5	15.14
Died:												
Under 1 month.....	3	11	14	8	18	26	.....	5	5	.....	.....	.....
From 1 to 3 months.....	8	7	15	10	7	17	4	7	11	.....	.....	.....
" 3 to 6 ".....	6	7	13	7	5	12	3	1	4	.....	.....	.....
" 6 to 12 ".....	4	2	6	6	8	15	1	7	8	.....	.....	.....
" 1 to 2 years.....	10	10	20	11	6	17	9	9	18	1	2	2
" 2 to 5 ".....	6	10	16	11	10	21	19	14	33	.....	.....	.....
" 5 to 10 ".....	1	4	5	1	1	2	1	6	7	.....	.....	.....
" 10 to 20 ".....	.....	4	4	.....	1	1	.....	4	5	.....	.....	.....
Over 20 years.....	1	.....	1	.....	1	1	.....	2	3	.....	5	7
Totals.....	39	55	94	50	57	107	39	55	94	4	16	20
Unknown.....	11	2	13	.....	.....	.....	11	2	13	.....	.....	.....
Totals.....	50	57	107	50	57	107	50	57	107	4	16	20
Average of known cases in months.....	24.89	24.23	24.56	14.48	23.9	19.19	74.85	48.13	61.49	216.25	100.0	112.0



ANNUAL REPORT
OF THE
INSTITUTIONS REGISTRATION DEPARTMENT
FOR THE YEAR 1908-09.

CITY OF BOSTON,
INSTITUTIONS REGISTRATION DEPARTMENT.
BOSTON, February 10, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR, — The twelfth annual report of the Institutions Registration Department for the year ending January 31, 1909, is herewith respectfully submitted.

During the past year the personnel of the department has not changed. Although a very perceptible increase has occurred in the various branches of the daily routine, no attempt has been made to increase the working force. At the present time there are employed in the office and for the maintenance of the transportation and ambulance service twelve persons, in addition to the registrar and the two permanent examining physicians.

The general scope of the work has not been broadened in any respect. While it might be desirable to do so, for instance in the direction of classifying and analyzing the accumulated material concerning the public wards of the city, the press of regular work does not permit it. The present office force, which has practically remained stationary since the department was first organized, is fully occupied with the fixed duties

imposed upon the department by law, as the sole admitting agency for dependent and defective persons to city and state institutions.

Both the number of applications received and the number of persons admitted or committed to institutions have been larger during the past year than at any time in the history of the department. As a matter of fact, the number finally distributed among institutions would have been even larger had certain institutions been capable or desirous of receiving all who wished to enter them. The department neglects no opportunity to furnish prompt aid to those entitled to it, but the opportunity for gaining immediate admittance to local institutions is not always at hand, particularly in the case of persons suffering from tuberculosis. For the present the local facilities for this class prove to be inadequate, as they have been in the past.

It has always been, and for some time is likely to be, a source of great perplexity to the department that there is no existing institution suitable to the needs of the group of applicants usually comprehended under the term of "rounders." It is made up mostly of men who through dissipation or general worthlessness have become unable to care for themselves, particularly during the stress of winter or when they are ill. The almshouse generally regards them as undesirable and troublesome. Although many of these persons belong distinctly to the vagrant class, the specific charge of vagrancy cannot as a rule be brought against them, and it is therefore not within the province of the department to seek their commitment to the State Farm. Still, in many instances, they are in dire need of institutional care, which cannot be denied them, and they are reluctantly sent to the almshouses. As has often been stated in these reports, it is to be hoped that in the near future some permanent and suitable provision can be made, preferably through the establishment of a farm colony for the reception of the incurable "rounder."

From year to year the number of persons who, for some cause or other, have been forced to seek the aid of the department has increased. Even under exceptionally favorable industrial conditions a marked decrease in the number of such persons is an unlikely occurrence. Experience in the past has taught that under all sorts of economic conditions an annual increase of public wards commensurate with the growth of the city's population is to be expected. During the past year it has been apparent that the recent industrial depression has caused an unusually large number of applicants, as the annexed table

of statistics shows. Also in the class whose dependence is not subject merely to lack of employment there has been a distinct increase.

INVESTIGATION OF SETTLEMENTS.

As the largest function of the department is to act as the admitting agency for adult dependents and defectives in Boston, it is the first duty of the department to receive applications for the admission of paupers and the commitment of the insane, dipsomaniacs, epileptics and other defectives, and to dispose of them after careful inquiry into the liability of the city for their support.

During the year ending January 31, 1909, the department investigated a total of 8,158 settlements, or 1,224 more than in the preceding year. This increase, as will presently be shown, bears a direct relation to the number of applications and the number of admissions and commitments to the various institutions, although in some years it may be that the investigations of settlements will show a decrease while there has been an actual growth in the number of persons admitted or committed to institutions.

Pursuing the policy of preceding years, the Children's Institutions Trustees continue to avail themselves of the services of the department in investigating the settlements of children. The number of such settlement cases investigated was 792, or an increase of 212 over the preceding year. This branch of the work has grown steadily in recent years.

In connection with applications it is very often necessary to make investigations outside of the office for the purpose of obtaining the necessary evidence and information upon which settlements can be determined; and to get other facts necessary for properly disposing of the applicants, their homes must be visited and their relatives or friends interviewed. It also very frequently occurs that the applicants are not in a physical condition making it possible for them to call at the office. In all, 1,509 investigations were made outside of the office, an increase of 104.

Exclusive of those relating to children, the number of settlements investigated will be seen to be considerably larger than the actual number of applications made to the department for various kinds of aid. The reason for this is that numerous dependent persons, for whose support the City of Boston may be liable, are sent to institutions from other cities and towns from whence the department is notified.

TOTAL ADMISSIONS AND COMMITMENTS.

There were in all 6,656 applications made to the department for different kinds of institutional care, an increase for the year of 915, as compared with the increase of 726 for the year 1907-08. These applications resulted in a total of 6,079 admissions and commitments to institutions, or 943 more than the preceding year, which again may be compared to the increase of 701 for the year 1907-08. It is shown below in which class of applicants this marked increase chiefly occurred. The department was obliged for a variety of reasons to refuse 49 applicants, which was less than half as many as last year. Applications were withdrawn in 528 cases, an increase of 24 for the year.

ADMISSIONS OF PAUPERS.

The persons who were admitted to almshouses formed 82.5 per cent of the total number distributed among institutions. There were in all 5,021 persons thus dealt with during the past year, or an increase over the preceding year of 897. It is thus apparent that paupers constitute by far the largest class with which the department is concerned. It should not be understood, however, that these numbers indicate a permanent class of dependents. Very many applicants are obliged to seek local and state institutions for medical treatment most of whom are subsequently discharged as more or less completely recovered. It will be noted that among those necessarily classified as paupers are included persons sent to the State Sanatorium at Rutland, which, of course, is not in any sense to be regarded as a pauper institution. The dependents under consideration were distributed among the state and city institutions as follows:

INSTITUTIONS.	Total.	Increase.	Decrease.
Boston Infirmary and Hospital at Long Island....	1,353	155	
Charlestown Infirmary.....	107	1	
State Sanatorium.....	15	.....	10
State Hospital at Tewksbury.....	3,546	751	
Total.....	5,021	897	10

The total increase of 897 admissions to institutions for paupers is unusually large and considerably greater than in 1907-08. The greatest increases was naturally in the num-

ber sent to the State Hospital in Tewksbury, but the admissions to the Boston Infirmary and Hospital at Long Island were also notably augmented. On the other hand, the admissions to the Charlestown Infirmary remained practically stationary, and a decrease of 10 is observed in the admissions to the State Sanatorium. As in former years, the figures indicate an increased pressure of applications from residents who are without a settlement in Boston, and therefore must be sent to the State Hospital. There is probably in Boston a growing class of persons who when they become dependent upon public aid find themselves without any legal settlement and thus are debarred from care at the pauper institutions of Boston. In times of industrial depression this condition is especially noticeable, as hard times always bring into Boston a large floating population, but it is also related to the large influx of foreigners who have not been here long enough to acquire a settlement.

The increase in the number of admissions to the Long Island Infirmary and Hospital signifies, among other things, that its facilities have been taxed to the limit. Very frequently beds cannot be provided in the hospital part for additional patients who are anxious to gain admission. This condition will doubtless continue until the new Consumptives' Hospital is able to care for a large number of patients. It is a source of no little hardship, especially in the case of persons whose condition is such that they should immediately be removed from their homes.

There were removed in the department ambulance during the year a total of 167 persons, a slight increase over the year previous. Mention is made of the fact to show the extent to which the department has to deal with the very sick who cannot be carried in an ordinary conveyance. Frequently the removal of persons must be postponed because they are too ill to risk the journey at the time application is made. As in former years, the department ambulance was placed at the disposal of private institutions for use in emergency cases.

COMMITMENTS OF THE INSANE, DIPSOMANIACS AND EPILEPTICS.

The two regular physicians of the department, with occasional outside assistance, made during the year 939 medical examinations of applicants for commitment, an increase of 43 over last year. As the result of these examinations a total of 1,058 persons were committed to various institutions, an increase for the year of 46.

Insane formed the largest class of persons committed, or 60

per cent of the total number sent to institutions, through legal process. There were in all 635 insane, who were distributed among hospitals as follows:

	Number.
Boston Insane Hospital	276
Danvers Insane Hospital	106
Westboro Insane Hospital	81
Taunton Insane Hospital	59
Worcester Insane Hospital	109
Bridgewater Insane Asylum	4
Total	635

The increase in the commitment of insane of 56 during the past year is slightly larger than usual, but does not call for special comment. The number of insane sent to institutions will always be found to vary from time to time, but a slight annual increase is to be expected and is in keeping with social conditions observed in other large centers.

Commitments to the Massachusetts Hospital for Epileptics number 39 for the year and show a decrease of 12.

In all, 258 commitments were made to the Observation Hospital at Deer Island. This is a decrease of 27 as compared with the year 1907-08, but is of no particular significance. This class of cases maintains a fairly constant level and shows no promise of a marked permanent reduction. Of the persons committed to the Deer Island Hospital, 124 men and 22 women suffered from delirium tremens; 77 men and 35 women were sent to the institution for medical observation in regard to their sanity. A considerable proportion of them were subsequently committed to public hospitals as insane.

In a number of its annual reports, the department has had occasion to deplore the lack of suitable provision which makes it necessary to send not only persons suffering from delirium tremens, but also persons who must be kept under medical observation until the question of their sanity can be determined, to a penal institution, no matter how admirable its hospital facilities may be. The long hoped for detention hospital, designed primarily for persons whose sanity is in doubt, has not yet materialized, but it is at least encouraging that a movement in that direction is kept alive. It is generally recognized as necessary to have such an institution as an adjunct to the hospital system of any large city. A detention hospital is required not only for those who may become suddenly unbalanced while away from home and among strangers, and for whom the cell of the police station now seems to be the only place of safekeeping, but chiefly for the class of insane who, until expert medical examination and com-

mitment can be made, are now confined in their homes. There is a very serious risk to all involved in this, and not merely a hardship. While one cannot have as great a pity for those who become insane through a direct fault of their own, it is true even of such that they should not be subjected to temporary confinement as prisoners. There certainly is no proper warrant for their detention for purposes of observation and temporary treatment in a hospital which is an integral part of the local House of Correction.

There has been a decided increase in the number of commitments of dipsomaniacs to the Foxboro State Hospital, which during the past year numbered 126 as against 97 during 1907-08. For several years previous there had been a general decline in the number of such commitments among residents of Boston. As has been pointed out in previous reports, this condition resulted in part from the rigid policy adopted in regard to the exclusion of unfit applicants, together with the refusal of this department to effect the commitment of any palpably incurable case, particularly of persons having a penal record. But the actual diminution of commitments also bore some relation to the conditions at the Foxboro Hospital. Since the hospital has been placed on a firmer footing, and under new management, the number of commitments from Boston appears to have taken an upward turn.

The adoption by the Commonwealth of a fixed and comprehensive policy for the institutional treatment of inebriates would be of the utmost importance to this department. Chiefly two classes of inebriates come under its view. The really hopeful cases, that is, the incipient drunkards who are most receptive to treatment, are comparatively rare among the applicants. But some apply who, under prolonged and systematic institutional care, would probably be found responsive. For such the Foxboro Hospital is the only available institution, and without its ministration the disposal of scores of applicants would become a most perplexing problem, not to mention the moral and economic burden they prove to their families and friends. It is quite as serious a problem what to do with the confirmed and incurable inebriates, who form a numerous contingent among the applicants. Left at large they are a menace to society. They are not fitted for a life in almshouses, where, among other things, the restraint is insufficient. To commit them to the State Farm requires criminal prosecution, which the evidence may not warrant. In short, no suitable institutional provision exists for this class, whose reclamation is in most instances hopeless. The burden of their more or less permanent segregation would,

however, not be as great as the one they at present entail. But this is a matter in which the Commonwealth, and not the individual municipality, must take the lead. The time seems ripe for the establishment of a permanent detention colony for this class.

REGISTRATION.

The department keeps up its efforts to put the large accumulation of important material relating to settlement histories and public wards into better shape for reference and preservation. During the entire existence of the department it has been one of its regular duties to collect and keep in convenient form all available information about persons who come into relations with the city as public charges, and to supply other departments and individuals who are entitled to it with proper facts concerning persons having been aided or applying for aid by the municipality. Intelligent disposition of applications demands a thorough knowledge of their past history, particularly in its relations to previous public aid. The inventory of the office, given on another page, furnishes some indication of the extent of the material that is kept on file for reference.

GENERAL REMARKS.

Much of the service performed by the department in relation to different classes of unfortunates and of the work done for other departments cannot be expressed in numbers or exhibited in an annual report. The routine work of the office is made up of numerous details connected with the reception of applicants, their treatment according to needs and settlements, their transportation to institutions, interviews with relatives and friends, etc. In the performance of its various functions the department continues to be much hampered by inadequate facilities. In almost every report it has been emphasized that the receiving rooms at the disposal of the department always have been and remain not only uninviting but unsanitary and scarcely habitable in cold weather. Yet in such a place people in different stages of disease are necessarily congregated and very often remain for hours. Applicants suffering from some communicable disease are by no means rare; they are a menace to those who must come in close contact with them, and to some extent to the general public.

The lack of privacy in the main office, which is often crowded with applicants of every condition and degree, has also repeatedly been commented upon. It is a distinct hardship to those who make application for relatives or friends, and are

often obliged to disclose painful family histories, that they cannot do so in the utmost privacy. The work of the office is of such a nature that it should not be performed in an office which is simply a thoroughfare used daily by scores of persons who have no business with the department.

FINANCIAL.

The total amount of the annual appropriation was \$20,000. In order to enable the department to meet its bills, a transfer was later on made so that the total amount afforded the department was \$23,279.82, which amount was spent and makes the total expenditures \$78.60 less than for the year 1907-08. The items of expense are given on another page. For a number of years the expenditures of the department have varied little, always being in round numbers about \$23,400. This year the department has sought an appropriation of \$23,500. It has been demonstrated during a considerable period of years that, as presently constituted, it can do its allotted work and keep within an allowance of \$23,500, but that a smaller amount is insufficient.

Very respectfully,

WILLIAM P. FOWLER,
Institutions Registrar.

Investigation of Settlements, etc.; Medical Examinations and Commitments of Insane, Epileptics and Dipsomaniacs; Admissions to Almshouses, 1908=1909.

DURING THE WEEK ENDING.	Number of Investigations.	Number of Outside Investi- gations on Application for Admission.	Number of Investigations on Application for Ad- mission of Children.	Number of Applications Withdrawn.	Number of Applications Re- fused.	Number of Medical Exam- inations.	ADMISSIONS TO ALMHOUSES.					Total.	COMMITMENTS OF THE INSANE.									GRAND TOTALS.	
							State Hospital, Tewksbury.	Almshouse, Long Island.	Almshouse, Charles- town.	State Sanatorium.	Deer Island Hos- pital.		Boston State Hos- pital.	Danvers In sane Hospital.	Westboro In sane Hospital.	Taunton In sane Hospital.	Worcester In sane Hospital.	Bridgewater In- sane Asylum.	Foxboro State Hospital.	Massachusetts Hos- pital, Epileptics.	Total.	Admissions and Commitments.	Settlements Inves- tigated.
1908.																							
February																							
1.....	12	1	2	1	1	1	8	28	1	1	1	9	108	2	1	3	1	1	2				
8.....	138	31	14	10	2	15	78	26	1	1	1	108	4	2	1	1	2	17	17				
15.....	126	27	11	15	4	20	69	17	1	1	1	97	4	1	1	1	1	17	17				
22.....	135	22	21	20	4	20	79	14	1	1	1	98	1	1	1	1	1	22	22				
29.....	128	17	14	14	2	14	65	21	1	1	1	80	2	2	4	4	3	21	21				
7.....	144	23	19	10	1	24	84	21	1	1	1	107	6	4	4	4	3	26	26				
14.....	120	24	10	12	1	12	73	22	1	1	1	96	4	1	3	3	1	17	17				
21.....	119	21	10	22	9	22	68	20	1	1	1	89	5	7	1	2	2	23	23				
28.....	116	19	17	20	2	20	69	13	4	1	1	87	8	3	1	1	1	18	18				
4.....	127	27	14	9	1	21	66	22	4	1	1	92	7	3	2	2	1	29	29				
11.....	144	24	11	23	9	23	84	23	1	1	1	108	5	4	3	3	1	27	27				
18.....	112	15	16	21	1	21	63	14	1	1	1	78	6	1	1	1	1	25	25				
25.....	110	22	15	19	1	19	55	20	1	1	1	76	2	1	1	1	1	22	22				
May																							
2.....	115	22	21	10	1	10	71	20	1	1	1	93	3	1	1	1	1	11	11				
9.....	186	39	14	25	1	25	113	31	8	1	1	153	6	3	3	4	3	20	20				
16.....	132	34	25	9	9	8	78	32	2	2	2	112	4	1	1	1	2	11	11				
23.....	139	23	26	10	10	14	81	22	1	1	1	106	7	1	1	1	1	23	23				
30.....	96	25	26	6	1	9	50	21	3	1	1	74	4	2	4	5	1	15	15				
6.....	123	32	21	13	1	25	52	22	9	1	1	84	9	2	3	2	1	25	25				
13.....	158	34	19	13	1	19	81	29	4	1	1	114	6	3	3	3	1	30	30				
20.....	120	36	20	10	2	24	49	32	2	1	1	83	5	1	2	2	1	25	25				
27.....	152	41	35	11	1	20	79	33	8	1	1	120	4	2	2	2	1	21	21				

July	4.....	110	24	26	9	16	64	22	2	...	...	...	5	...	...	...	12	101	147
	11.....	123	30	20	18	22	47	30	11	...	...	...	9	...	...	...	28	105	161
	18.....	127	30	21	11	19	67	27	4	1	...	...	2	...	...	...	18	115	155
August	25.....	137	37	24	17	27	64	31	6	1	...	...	...	...	...	1	19	119	171
	1.....	135	35	17	10	24	63	33	8	4	...	...	...	...	...	3	27	124	162
	8.....	126	34	12	8	17	66	28	2	6	...	...	...	...	...	3	18	127	145
	15.....	148	27	15	10	20	86	26	5	10	...	...	...	...	...	5	25	138	182
	22.....	120	27	15	8	17	67	24	3	...	...	...	3	...	...	2	17	112	154
September	29.....	120	32	16	8	13	62	29	9	...	...	...	2	...	...	4	17	109	143
	5.....	107	17	15	14	16	57	17	8	1	...	...	...	...	...	...	19	93	134
	12.....	89	18	10	8	22	44	16	4	...	...	...	7	...	...	...	19	81	114
	19.....	95	25	3	6	21	36	34	8	8	...	...	...	...	...	2	28	89	106
October	26.....	103	37	7	12	18	37	34	4	9	...	...	...	...	...	2	17	89	122
	3.....	146	38	16	17	20	69	37	2	6	...	...	...	...	...	2	22	129	182
	10.....	128	35	14	6	21	67	35	8	5	...	...	...	...	...	3	20	122	153
	17.....	129	37	7	9	24	56	32	8	...	...	...	8	...	...	4	27	120	146
	24.....	128	36	11	10	16	65	32	...	...	...	...	5	...	...	3	17	117	162
November	31.....	111	25	10	10	17	56	19	3	...	...	...	4	...	...	6	20	99	135
	7.....	125	28	10	9	17	69	28	2	...	...	...	7	...	...	1	19	116	142
	14.....	131	35	14	11	13	70	32	6	...	...	...	1	...	...	1	15	117	161
	21.....	112	31	8	7	13	60	29	...	...	...	...	3	...	...	5	14	104	133
December	28.....	121	20	9	14	19	62	18	...	...	...	...	6	...	...	3	25	106	141
	5.....	134	31	15	15	14	78	29	4	...	...	...	4	...	...	3	18	127	167
	12.....	140	33	14	11	...	84	33	3	3	...	...	...	...	...	1	12	129	171
	19.....	151	39	17	5	...	92	34	5	3	...	...	...	...	...	...	15	145	179
	26.....	97	16	12	7	...	56	16	5	2	...	...	...	...	...	4	18	90	122
1909.																			
January	2.....	174	35	6	11	30	91	35	10	8	...	...	1	...	...	37	163	193	
	9.....	153	39	14	11	15	88	35	6	...	...	...	...	...	...	2	15	140	183
	16.....	151	38	11	11	14	83	36	3	...	...	...	...	...	...	5	19	140	171
	23.....	105	30	12	6	17	54	24	3	...	...	...	1	...	...	1	15	93	137
	30.....	128	31	10	7	15	71	26	8	...	...	...	...	...	...	3	19	119	149
		6,656	1,509	792	528	49	939	1,353	276	106	81	59	109	4	126	39	1,058	6,079	8,158

TOTAL EXPENDITURES FOR THE YEAR.

Salaries	\$16,299 80
Medical attendance	3,162 00
Transportation	1,561 33
Horse keeping	1,582 45
Printing	193 51
Office expenses	133 25
Postage	112 50
Telephone	133 01
Food	65 12
Stationery	36 85
	<u>\$23,279 82</u>

INVENTORY OF PROPERTY IN THE POSSESSION OF THE
DEPARTMENT.

Furniture, etc., Office, Room 2.

1 stationery bookcase.	1 telephone and sound proof booth for same.
1 revolving bookcase.	1 clothes cabinet, containing five lockers.
1 counter with drawers.	10 cabinets for settlement histories, correspondence, cards, etc.
3 roll top desks.	20 chairs.
1 typewriter desk.	
1 accountant's desk.	
2 typewriters.	
1 letter press and cabinet.	

Furniture, etc., Examining Physicians' Office.

1 roll top desk.	1 mirror.
9 chairs.	2 oilcloths.
1 bookcase.	28 volumes medical records.
1 lounge.	

Furniture, etc., Basement.

1 large table.	2 cabinets.
4 small tables.	1 blanket chest.
3 settees.	1 rubber mattress and pillow.
16 chairs.	1 hair mattress and pillow.
2 clothes closets.	2 iron beds.
1 medicine closet.	

Transportation.

1 carriage.	1 single harness.
2 horses for same.	2 stretchers.
2 double harnesses.	2 mattresses for stretchers.
3 stable blankets.	6 blankets for stretchers.
3 street blankets.	2 robes.
1 ambulance.	2 whips.
1 horse for ambulance.	

RECORDS.

Miscellaneous volumes and cards, containing records of admissions to almshouses and other institutions.

Five account books (one bill book, one journal, one ledger, one expenditure book and one pay roll).

Two volumes records Overseers of the Poor.

About 71,000 settlement histories (written).

Miscellaneous volumes, such as Boston Directories, Acts and Resolves, tax books, settlement records, and reports of various kinds.

Four thousand large cards (new).

Forty thousand large cards, containing records of persons in institutions.

About 6,000 history blanks.

About 7,000 blank index cards.

About 900 miscellaneous blanks for commitment of insane and inebriates.

Miscellaneous office stationery.



ANNUAL REPORT
OF THE
LAW DEPARTMENT

FOR THE YEAR 1908-09.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD, *Mayor*:

SIR,—The report of the Law Department for the year ending January 31, 1909, is herewith submitted, containing a brief general statement of the business and doings of the department during the year. A full and detailed statement, from the nature of the work, could not be made except at very great and tedious prolixity.

The character of the business and work of the department is substantially the same each year but there has been a very great increase in amount and importance during the past ten years. For instance, a comparison of the legislative matters in which the City was interested which were before the Legislature of 1908 and those before the Legislature in 1898 shows that they have more than doubled in number, and it seems probable that the number of such matters before the Legislature of 1909 will greatly exceed those brought before the Legislature of 1908.

Ten years ago there were about eight hundred cases pending in the various courts in which the city was a party or interested; now there are twelve hundred and five. There has been a constant increase, with the exception of accident cases, in all the duties of the department, including the care

of matters before the Legislature and in the courts, examination of titles, the giving of written opinions and oral advice in answer to requests therefor from the Mayor, heads of departments, officers of the city, Board of Aldermen, the Common Council, Committees of the City Council and the School Committee, the investigation and passing upon claims against the city, which have been allowed by the Committee on Claims of the City Council, attendance before committees, and the work connected with making settlements the drafting, supervision, and approval of contracts, bonds and other instruments relating to matters undertaken by or for the city or in which it had an interest, the drafting of ordinances, legislative acts, contracts, orders and reports, and, in general, the legal matters affecting the city or its departments have substantially doubled during the last ten years.

The report of the Commissioners on the Abolition of Grade Crossings in Dorchester from Harrison square to the Neponset river, and the laying out and widening of Washington street as a state highway have already largely increased the matters brought into the office for settlement, and as soon as the railroad begins work on the grade crossings, many additional cases will be brought.

The number of cases in the courts in which the city was or is a party or interested, pending February 1, 1908, those since instituted, those disposed of during the year and the number now pending are shown in the following table, under heads indicating the nature or subject of the actions, viz:

SUBJECT.	Pending January 31, 1908.	Brought since January 31, 1908.	Disposed of during the year.	Now pending.
Assessments, betterments taxes, water rates, etc.	126	84	33	177
Building laws.....	74	13	10	77
Damages for taking land, or water rights, grade changes, etc.....	355	71	96	330
Injury to person or property by negligence, street defects, etc.....	301	118	148	271
Damage by overflow from sewers, drains, water pipes, etc.....	272	63	117	218
Miscellaneous.....	136	66	70	132
Totals.....	1,264	415	474	1,205

Besides the above, there are some five hundred cases in which the city was summoned as the trustee of the principal defendant.

A list of cases pending, giving the names of the parties, plaintiff or defendant, and the causes of action, is transmitted herewith for reference.

As stated in the last report, Mr. Edward F. Buckley, formerly an assistant to the Corporation Counsel, resigned January 31, 1908. On or about March 1, 1908, Mr. Karl Adams was appointed to the vacancy made by said resignation.

The following list shows the present members of the department and their respective positions and yearly salaries:

Thomas M. Babson, Corporation Counsel	\$9,000
John D. McLaughlin, Assistant Corporation Counsel	6,000
Arthur L. Spring, Assistant Corporation Counsel	5,000
Philip Nichols, Assistant Corporation Counsel	3,000
George A. Flynn, Assistant Corporation Counsel	2,500
David D. Leahy, Assistant Corporation Counsel	2,200
Karl Adams, Assistant Corporation Counsel	2,100
Charles F. Day, Conveyancer	3,750
Roscoe P. Owen, Conveyancer	3,750
Elizabeth M. Taylor, Conveyancer	1,800
Fisher Ames, Secretary	2,000
Nina F. Bachelor, Stenographer	960
Daniel B. Carmody, Messenger	600
James McGoldrick, Errand and Telephone boy	240
Joseph H. Robishow, Errand and Telephone boy	184

The property of the department remains as heretofore, office furniture, law books, atlases, etc., with the addition during the year of a few current law reports and books.

The department receives no income and its expenses have been within its appropriation.

Respectfully submitted,

THOMAS M. BABSON,
Corporation Counsel.



ANNUAL REPORT
OF THE
LIBRARY DEPARTMENT
FOR THE YEAR 1908-1909.

TO HIS HONOR GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,—The Board of Trustees of the public library of the City of Boston present the following report of its condition and affairs for the year ending January 31, 1909, being their fifty-seventh annual report.

The general ordinance as to department reports requires that they contain “a statement of the acts and doings, and receipts and expenditures of the department for the financial year, together with such other matter as may be required by law, or as the Mayor or officer may deem to be of public interest.”

The special ordinance as to the Library Department also requires the Board of Trustees to “include in its annual report a statement of the condition of said library, the number of books that have been added thereto during the year, the report of the committee appointed to examine said library, and the total amount of money received from fines and sales.”

This report is intended to conform to these requirements, and, though it is more full than the reports of the department have usually been, contains only that which the trustees “deem to be of public interest” at the present time.

ORGANIZATION OF THE BOARD.

The Board organized on May 8, 1908, by the election of Mr. Josiah H. Benton as president, Mr. Thomas F. Boyle, vice president, and Miss Della Jean Deery, clerk.

The term of Thomas Dwight expired on April 30, 1908, and Samuel Carr was appointed a member of the Board for five years from that date.

Rev. James DeNormandie resigned, and Rev. Alexander Mann was on May 25, 1908, appointed for the unexpired term, ending April 30, 1910.

Dr. Dwight was a trustee for nine years and Rev. Dr. DeNormandie for thirteen years. Resolutions in appreciation of their long and valuable services and extending to each of them the freedom of the library alcoves have been placed upon the permanent records of the trustees.

RECEIPTS AND EXPENDITURES.

The receipts of the library are of two classes: First, those which are to be expended by the trustees in the maintenance of the library. These consist of the annual appropriation by the City Council, and the income from trust funds given to the trustees but invested by the City Treasurer under the direction of the Finance Committee of the city. During the past year these receipts were as follows:

Annual appropriation	\$310,000 00
Income from trust funds, including unexpended balance of previous year	36,992 95
Total	\$346,992 95

Second, receipts which are accounted for and paid into the city treasury. These consist of receipts from fines for the detention of books, from sales of finding lists, bulletins and catalogues, from commissions paid for the use of telephone facilities, from sales of waste, and from payments for lost books. These receipts, including money found in the library, during the year have been as follows:

From fines	\$5,548 05
From sales of finding lists, etc.	125 02
From telephone commissions	99 88
From sales of waste	53 22
From payments for lost books	258 00
From money found	7 14
Total	\$6,091 31

The \$258 received for lost books, being only received to replace lost library property, is, when paid into the city treasury, added to the appropriation for library maintenance. A detailed statement of receipts and expenditures is hereto annexed.

REDUCTION IN APPROPRIATION.

The original estimates for library maintenance during the current year, submitted by the trustees in December, 1907, amounted to \$332,800. The amount appropriated was \$310,000, a reduction of \$22,800 from the estimate, and of \$15,000 from the appropriation of \$325,000 for the preceding year, all of which had been required for maintenance.

Under these circumstances the trustees have been forced to restrict their expenditures below the amount needed to maintain the library at its usual point of efficiency. Purchases of supplies have been confined to immediate necessities; fuel, especially, has not been bought in advance of the requirements of the calendar year; repairs which under other conditions would have been made, but which could be deferred for a few months, have been postponed; books, which are needed to meet the legitimate demands of the public, if the library is to be effectively operated, have not been purchased; and the expenditures for service have been brought within the lowest practicable limits.

The usual working hours of the library during the daytime have been maintained, except that in the branches the usual Sunday opening following the summer vacation was deferred some weeks; but the evening service at the Central Library during the fall months was diminished one hour, the library closing at nine instead of ten o'clock. Some diminution of service being required in order to keep within the amount of appropriation, this manifestly interfered least with the general use of the library.

CENTER FUND REAL ESTATE.

Real estate given to the trustees by the will of the late Joseph H. Center consists of estate 1199 Washington street, occupied by the South End National Bank under lease existing when the property was received by the trustees, and not yet expired, and estate 15 Arnold street. The assessed value of both these pieces of real estate is \$19,800. It has not been practicable to make an advantageous sale of this property, and the rents therefrom, after deducting necessary expenses for collections and repairs, are paid over to the City Treasurer from time to time to be invested by him under the direction

of the Finance Committee of the city. The accumulated amount of such rents not so invested January 31, 1909, was \$2,546.18.

REINVESTMENT OF THE TREADWELL FUND.

Under the will of the late Daniel Treadwell of Cambridge, who died February 27, 1872, one-fifth of the residue of his estate was given to "the Trustees of the Public Library in the City of Boston." The City Council accepted the bequest and authorized the trustees of the public library to receive the same and invest it in City of Boston bonds. All of the bequest, except sixteen shares of Boston & Albany Railroad stock, six shares of Boston & Providence Railroad stock, twelve shares of Fitchburg Railroad preferred stock, and one share of Vermont & Massachusetts Railroad stock, was invested in city bonds before this year. During this year the trustees have sold the shares of stock above enumerated for the gross sum of \$7,364.78, which has been invested in one 4 per cent city bond, payable in 1947, registered in the name of the trustees and now in the custody of the City Treasurer.

TERMINATION OF THE CONTRACT WITH AUGUSTUS SAINT-GAUDENS.

The contract between Augustus Saint-Gaudens and the City of Boston, acting through the trustees of the public library, made November 30, 1892, under which groups of statuary by Mr. Saint-Gaudens were to be placed on pedestals upon the platform in front of the Copley square entrance to the Central Library building, was terminated by the death of Mr. Saint-Gaudens during the summer of 1907, and the \$6,000 which had been paid on account returned to the city treasury by the estate of Mr. Saint-Gaudens, as provided by the contract in the event of such a contingency.

ADDITIONS TO THE LIBRARY.

During the year 22,931 volumes have been added to the library collection. Of these 12,492 were purchased, 6,163 were given to the library, and the remainder was received by exchange, binding of periodicals into volumes, etc.; 7,346 volumes were purchased for the Central Library, and 5,146 for the branch libraries and reading rooms.

The total amount expended for books, including \$3,642.81 for periodicals and \$2,168.34 for newspapers, was \$37,091.13, or 11.3 per cent of the entire expenses of the library for all purposes.

The average cost of all books purchased was \$1.98 per volume. Of these 7,020 were bought from money appropriated by the city at an average cost of \$1.18 a volume, and 5,472 were bought with the income of trust funds at an average cost of \$2.87 a volume.

The most expensive books increase in value with the lapse of time, and most of the less expensive rapidly wear out with use or become of less value from the issue of other books on the same subjects. It is estimated that about 150,000 of the books in the library are not worth commercially more than ten cents apiece.

Books are purchased only by vote of the trustees, and at prices fixed by the vote. The titles of the books recommended for purchase by the librarian are put upon cards and submitted to a committee of two of the trustees weekly. A list of the titles and prices of books which that committee recommends for purchase is then made, and copies of it sent to each of the trustees at least two days before their weekly meeting. This list as revised and voted by the trustees is sent to the Ordering Department as authority for the purchase of the books. Duplicate bills of the books are required to be sent to that department. One bill is filed at the City Hall as required by law, and the other entered alphabetically by the Ordering Department in its bill book, with the entry date and alphabetical designation recorded on the bill. These data are also entered on the reverse of the title-page of each book charged in the bill, so that the book can always be traced from the bill and the bill from the book. This bill is certified by the Ordering Department as correct and sent to the library auditor, by whom it is compared with the list and price voted by the trustees, entered and audited for payment, and finally returned to the Ordering Department, where it receives a file number and remains on file. The book is then examined, page by page, and plate by plate, to see if it is perfect, the bookplate of the library pasted in, and the original card upon which its title was written placed in the book, and it is sent to the Catalogue Department.

BOOK CIRCULATION AND USE OF THE LIBRARY.

There were issued for direct home use last year 308,178 volumes at the Central Library, and from the Central Library through the branches 83,957 more, while the branches and reading rooms also issued 1,162,892 volumes for home use, making the entire issue for home use 1,555,027 volumes.

The use of the library for general reference and study is so unrestricted that no accurate statistics of it can be given.

Its extent, however, is shown by the fact that about half a million call slips for the table use of books in Bates Hall alone were necessary last year. The daily use of books and other library material in the Central Library and in the branches is doubtless many times greater than the home use of books drawn out upon cards, and requires constant and accurate service by a large force of employees.

The mere obtaining and delivering of a book to a reader in the Bates Hall reading room of the Central Library requires the intelligent and accurate services of six different persons, if the book is in its proper place in the stacks. The return of the book to its place requires the services of four persons.

The obtaining and delivering to a card holder of a book for home use requires the services of four persons, and the return of the book to its place requires also the services of four persons, none of whom should make any mistakes, and all of these services require the accurate and efficient working of the mechanical book carrier system.

Books are issued for home use either for seven or fourteen days. In order to secure their return within that time a fine of two cents a day is imposed after the expiration of the time, to be paid by the card holder before any more books are issued upon the card. The approximate number of persons paying such fines during the year 1907 was 63,060, who paid an average per person of 8.8 cents, amounting in the aggregate to \$5,584.02. This was all paid into the city treasury, as required by law, although the work of collecting and accounting for it in such small amounts was not inconsiderable.

REBINDING AND REPAIR OF BOOKS.

The trustees regret to say that they have not been able with the means at their command to keep the books and other library material in proper condition of repair. They have spent in binding and repair of books and other library material as much as could be spent without impairing the general library service, but this has not been sufficient. Many books must be at once rebound or withdrawn from circulation. Twenty-five hundred dollars have been included in the estimates for the next year to provide in part for additional binding, and much more must be spent for that purpose to keep the books in suitable condition for use.

CONDITION OF THE LIBRARY.

To properly state "the condition of the library" requires a statement of what the library is as real and personal property, and of how it is maintained and worked.

The library was opened on May 2, 1854, in two small rooms on Mason street, also used for other municipal purposes, with less than ten thousand volumes, mostly acquired by gift. It has developed into a library system which is not only a collection of books, maps, manuscripts and other literary matter unequalled, in some respects at least, by any of the great libraries of the world, but is also a large, complicated and delicate business machine. The conduct of its business involves the disbursement for books, supplies, transportation, salaries and other expenses, many very small in amount, of over \$30,000 every thirty days.

As real estate the library consists of twenty-nine pieces of land and buildings or parts of buildings in different parts of the city, of an estimated aggregate value of about four and a half million dollars. The Central Library building has cost up to the present time, exclusive of the land upon which it stands, \$2,743,284.56.

The city also owns nine other pieces of real estate occupied for public library purposes, and other buildings or parts of buildings occupied for public library purposes are leased at an annual rental of \$16,933. In addition to rental paid for these leased premises sums which in the aggregate are large have been paid for the necessary and proper adaptation of the premises to library uses.

The floor area in daily use in these premises amounts to 260,000 square feet, or nearly six acres. All these different buildings and premises must be kept in repair, cleaned, policed, heated, lighted and maintained in proper condition for library use. The care of the Central Library building alone comprises the protection, repair, cleaning, lighting, heating and maintenance of a building which covers 65,000 square feet of land, and has a floor area in daily use of 150,000 square feet.

As personal property the library is primarily a collection of nearly one million volumes of books, accurately speaking 963,090, of which 746,514 are in the Central Library and 216,576 are in the various branches and reading rooms. The principal branches are considerable libraries in themselves, the nine largest branches having an average of over 20,000 volumes each.

The shelves required for the books in the Central Library and branches would extend in a single line for a distance of between nineteen and twenty miles.

There are also in the Central Library about 35,000 separate manuscripts, and about 150 volumes of manuscript books, over 200 atlases, about 10,000 maps, and nearly 30,000 photographs, prints, engravings and other pictures.

Each branch has also its own collection of photographs and pictures varying in number from 1,000 to 2,000, in all about 13,000.

The catalogues of this collection comprise 3,436,490 separate cards, and the cases containing them would extend about five-sixths of a mile.

Nineteen different card catalogues, containing 2,977,790 cards, are necessary for the working of the material of the Central, and fifteen separate card catalogues, containing 458,700 cards, are employed in working the collections in the different branches and reading rooms.

The library also has a printing office, employing seven persons, where an average of over 200,000 catalogue cards, half a million forms, nearly two million call slips for the use of books, and the various weekly lists of new books, quarterly bulletins, finding lists, and other publications, amounting annually to about 70,000 copies, are printed for distribution among the people; and a bindery employing twenty-nine persons, where photographs and engravings are mounted, volumes repaired, periodicals stitched, library publications prepared for use, and about 30,000 volumes annually bound.

About 375 different newspapers and nearly 1,700 different periodicals are in daily use in the Central Library and the branches. There are also many valuable paintings, photographs, busts of distinguished persons, and statuary, mainly, but not entirely, contained in the Central building.

The commercial value of this personal property is probably not less than three million dollars, and some of it is unique, so that if destroyed or sold it could not possibly be replaced.

The aggregate commercial value of the real and personal property devoted to free public library purposes in the City of Boston is not less than seven and a half million dollars and, in addition to this, gifts have been made by thirty-three different persons or societies, in sums varying from \$100 to \$100,000, for the benefit of the library and its branches to the amount of \$447,024.42, making an aggregate amount of property of about \$8,000,000 employed in the library work of the city.

COMPARATIVE VALUE OF LIBRARY PROPERTY.

Boston, with less than one-half the population of all the other thirty-two cities in the Commonwealth combined, has approximately twice as much money invested in public library property as all the other cities combined. It has $29\frac{3}{10}$ per cent of the population of the thirty-three cities, and the other thirty-two cities have $70\frac{7}{10}$ per cent, that is, there are about seven

persons in the other thirty-two cities combined as against about three persons in Boston. But Boston has about \$60.43 invested in its public library property as against about \$39.57 invested in similar property in all the other thirty-two cities combined.

Stated in another form, the comparison is this: Boston has $41\frac{5}{10}$ per cent of the entire population in all the other thirty-two cities, while the amount invested in public library property in these thirty-two cities is only $65\frac{5}{10}$ per cent of the amount invested in public library property in Boston alone. That is, with a population only four-tenths as large as the combined population of the other thirty-two cities, Boston puts to the use of its public library system property nearly four-tenths greater in value than all property put to similar uses in the other thirty-two cities combined.

If we compare the value of the public library property of Boston with the value of such property in all the other cities and towns in the Commonwealth, we find that with a population of $19\frac{8}{10}$ per cent of the entire population of all the other cities and towns, Boston has public library property of $71\frac{1}{10}$ per cent of the value of all such property in all the other cities and towns in the Commonwealth.

THE OPERATION OF THE LIBRARY.

The property and plant of the library system is of value only as it is worked. The books, manuscripts and other material are useless except when they are being read and examined. And the public library plant, like every other, should be worked, if it is worth working at all, to the limit of its capacity. It would be as absurd to work the public library plant to half its capacity for profitable use as to work only half the spindles in a mill, or half the locomotives upon a railroad. The problem of working the public library, therefore, is the problem of bringing its books and other material into the most general and extensive public use within the limit of the amount of money which the taxpayers are willing to pay for that use. The organization and method by which the trustees endeavor to thus work the library is substantially as follows:

CATALOGUES.

The library cannot be worked at all without proper catalogues, and the making of catalogues for such a large library is a most complex, delicate and difficult task. The catalogues of the library are the eyes through which people who use it can see what there is in it, and find what they want.

The simplest form of cataloguing requires at least two cards for each book,—one with the name of the book, the date of printing, number of pages, edition, size, etc., the other with the name of the author and the other information which is noted upon the first card. This applies to the ordinary book of fiction, but if the book of fiction be historical, its scene laid in some particular country, a third card is desirable containing the name of the country and the other information upon the other two cards.

If the book, however, relates to some department of human knowledge,—as for instance, botany,—there must be a card with the name of the book, its subject-matter,—botany—date of publication, size, pages, etc., and a similar card with the name of the author, and a third card with the title, botany, at the head, and if the book relate to the botany of a particular part of the world,—for instance, Massachusetts,—a fourth card is required under the title Massachusetts.

And if a book is upon a general subject which embraces several subordinate subjects in the book, further cards are desirable with the title of each of the several subjects. The cataloguing of a book may be simple, or it may be very complex, according to the character of the information which should be given to one consulting the catalogue to find information as to any particular subject or person.

The cards are of no use until there is put upon them numbers indicating where in the library the book is to be found. To enable this to be done the departments of human knowledge are arbitrarily designated by numbers, differing somewhat in different systems of cataloguing. For instance, botany might be represented by the number 16, indicating that under the number 16 in the library stacks books on botany are to be found. To this class number are added other numbers indicating the shelf in that portion of the stacks where the book is to be placed, and the position of the book on that shelf. These three numbers enable the person knowing their significance to go to the place in the library where the book is to be found.

After the book has been assigned to a position by the Shelf Department, that is, by the department having charge of the shelves where the books are placed, these numbers are put upon all the cards representing the book, the cards printed in the Printing Department, and the proof read in the Catalogue Department. All this must be done with absolute accuracy, because if a book is improperly catalogued, or improperly numbered, it may as well be lost, since nobody can find it to use it.

But after this is done the book is not ready for use. The plates, if there be any in the book, must all be stamped with indelible ink to show that they belong to the public library, the title-page must be stamped "Boston Public Library" with a perforating stamp, and then a slip must be pasted into the book upon which when it is issued for use the date and the fact of issue can be noted.

All these things must be done in a more or less simple or complex form before any book can be placed in the library in a condition and position to be used. Each of the three million catalogue cards in the library system has required these various processes of work. In addition to this there are notes as to different editions, as to the real name of the author, where the book is written under a fictitious name, cross references to other books relating to the same subject, and an amount of information more or less extensive, according to the importance of the book and of the subject to which it relates, which it is desirable and often necessary to place upon the cards to enable them to be conveniently and efficiently used.

Of course catalogues of engravings, pictures, photographs, newspapers, and other material, do not require the same elaborate treatment as cards for books, but they do require equal accuracy, and in many cases details quite as extensive as those required upon the cards for books.

All books purchased are catalogued as soon as possible. Books acquired other than by purchase are catalogued only upon recommendation of the librarian and vote of the trustees after such recommendation has been laid over one week.

SHELVING AND TRACING OF BOOKS.

To keep track of the contents of the library after they are catalogued, it is necessary to keep a list called a shelf list, showing the number of books that belong on each shelf, and by this list the shelves are read each year, so that if a book is not on the shelf and is not properly charged out as being in use, its absence is detected. This process requires the service of six competent persons working each forenoon of each working day throughout the year in the Central Library alone. The same process of reading is applied also to the shelves in the branch libraries.

About 200,000 volumes in the Central building are on shelves where they can be taken down and consulted, without the service of an attendant, as in Bates Hall, or with the service of an attendant, as in the special collections and in the Fine Arts, Patent and Music Departments.

ANNUAL INVENTORY.

An annual inventory is made at the end of the year of all the personal property of the library, except works of art, books and other library material shown on the shelf list and included in the catalogue.

PERSONS WHO WORK IN THE LIBRARY.

The persons employed in the library are organized under the following heads: Executive Department, including the librarian, assistant librarian, auditor, clerk, custodian of the stock room, etc.; Catalogue Department, including the chief cataloguer and assistants; Ordering Department; Shelf Department; Bates Hall, including the custodian and assistants; the Special Libraries, including also all persons employed in the Department of Music and Fine Arts; Statistical Department, including documents and manuscripts; Periodical and Newspaper Rooms; Patent Department; Issue Department; Children's Department; and the Registration Department, which registers card holders entitled to take out books for home use, and the Branch Department, in charge of the supervisor of branches and reading rooms, who has supervision of the operation of the branches and reading rooms individually and in connection with the Central Library. All these departments are located in the Central Library building.

The library has eleven branches and seventeen reading rooms located in different parts of the city, each of which has a custodian in charge of its work, with necessary assistants, and in most cases a janitor to care for the premises.

Printing and Binding Departments, employing thirty-six persons, are maintained in separate premises at 42 Stanhope street.

For the Sunday and evening service forty-four places must now be filled in the Central Library, and thirty-eight places in the branches, requiring the employment of one hundred seventy-one persons. Much of this service is performed by persons employed from outside the regular library force, and paid by the hour for actual service according to a schedule of the positions and rate per hour to be paid authorized by the trustees.

Throughout the system a time register is kept, in which employees are required to enter the exact time that they arrive on duty each day, and their absence from duty during regular hours is also noted thereon.

The regular library staff, so called, that is, the persons employed in working the books, maps, manuscripts and other material in the library for the use of the public, consists of two hundred nineteen persons, of whom forty-six are employed in the Ordering, Cataloguing and Shelf Departments, thirty-one in the Issue Department of the Central Library, nine in Bates Hall, twelve in the Department of Special Libraries, Fine Arts, Music, etc., twelve in the Branch Department at the Central building, and seventy-seven in the branches and reading rooms. The remaining twenty-one are employed in the Children's, the Registration, Statistical and Executive Departments, and in the Patent, Newspaper and Periodical Rooms.

SALARIES AND WAGES.

The employees in the Binding and Printing Departments are paid union wages and work union hours. All other employees who are classed either as "laborers, workmen or mechanics" are employed at wages prevailing in those employments and at hours fixed by the state law applicable to cities which have accepted its provisions, as Boston has, at "not more than eight hours in any one calendar day, or more than forty-eight hours in any one week."

The other employees of the library, constituting the regular library staff, two hundred nineteen in number, are paid salaries fixed by vote of the trustees. Eighty-five of these employees are males and one hundred thirty-four are females. The average compensation of all these persons, including the librarian, assistant librarian and heads of departments, is \$670.45 a year, the average of all the males being \$853.90, and of the females \$584.28 a year.

Excluding the librarian, assistant librarian and ten other persons employed as heads of departments, the average salary paid to the remaining two hundred seven persons is \$585.34 a year. Of these persons seventy-five are males who receive the average salary of \$610.12 a year, and one hundred thirty-two are females who receive the average salary of \$575.22 a year.

The custodians of branches, which are really libraries in themselves, are all women, and the highest salary paid to any one of them is \$910 a year.

A vacation, without loss of pay, is allowed to each employee in the regular force of two days in each month, or twenty-four days for each full year's service. One-half of this vacation is allowed to all other employees. Beyond this no

person is paid while not actually on duty, except by special vote of the trustees in an occasional case of extreme hardship from sickness.

No person is added to the regular pay roll, nor is the salary of any employee on the pay roll increased, without a specific vote of the trustees in the form of an order in each case, an attested copy of which is filed with the City Auditor.

The weekly pay rolls are made in duplicate, showing the name of each person employed, the character of the service performed, the rate of salary or wage, and the amount payable to every such person for the week. These are prepared and signed by the library auditor, and after the approval attested by signature of the librarian, signed and sworn to by the president of the trustees. They are then sent to the State Civil Service Commission, and its certification of approval affixed, after which one set is sent to the City Auditor as the warrant for the weekly payment of the employees, and the duplicate set is filed in the office of the State Civil Service Commission.

EDUCATIONAL QUALIFICATIONS.

Three grades of educational qualifications are required of persons employed, and determined by competitive examinations. The lowest grade, which includes a comparatively small number of pages, subassistants, etc., requires a training equivalent to a grammar school course. The middle grade requires qualifications equivalent to a high school training and familiarity with one foreign language. The third grade, including seventy-seven of these persons, requires qualifications equivalent to those obtained by a college course, and familiarity with two foreign languages.

The proper cataloguing and classifying of books and the reference work necessary to aid those using the library also requires in many positions much higher qualifications than those which could be obtained by the ordinary college course.

SUPPLIES, REPAIRS AND CONTRACTS.

No supplies are purchased or repairs made without vote of the trustees. At each weekly meeting the librarian submits a list of these which, upon examination and revision, is voted by the trustees, and then transmitted to the library auditor as authority for the purchase and repairs. All orders for such supplies or repairs are in writing, signed by the librarian, and numbered to correspond with the stub record, upon which is minuted the date of the list authorized by the

trustees on which the item appears, and the number of the item on that list. Bills rendered are checked up from the stub record, and the receipt of the goods or the completion of the repairs is certified by the head of the department to which the goods are delivered, or in which the work is done, or if the receipt is for supplies to be kept in stock their receipt is certified by the custodian of the stock room. The bill then goes to the library auditor, who certifies it as correctly figured. It is then indorsed by the librarian, presented to the trustees, and its payment voted by them. A requisition is then drawn by the library auditor upon the City Auditor for the payment, which is signed by the president of the trustees, and attested by the clerk of the corporation.

Supplies are disbursed from the stock room only upon requisition by the head of each department for which any supply is needed, which must be approved by the librarian, and is then honored by the custodian of the stock room, who keeps a record showing all purchases, from whom purchased, amount paid, distribution by day, month and year to the several departments of the library, and at the end of each year makes a summary account showing under each department the amount and cost of the supplies furnished to it, itemized under the several articles.

The originals of all contracts made are filed with the City Auditor, and a duplicate copy with the library auditor, and under the state law requiring it a copy of each contract is also deposited in the office of the City Clerk.

HOURS OF SERVICE.

The Central Library and the branches open and their work begins at nine o'clock in the morning. The reading rooms open in the afternoon at varying hours, principally at two o'clock. The service continues until ten o'clock at night at the Central Library building and at the West End Branch, and until nine at the other branches and reading rooms, except during the summer months. During June, July, August and September the Central Library and West End Branch are closed at nine o'clock. The other branches and reading rooms during a shorter period close earlier than in winter, principally at six o'clock. The Central Library is in operation 102 week days of 12 hours each, 203 week days of 13 hours each, 17 Sundays of 7 hours each, and 35 Sundays and 2 holidays of 8 hours each, making an aggregate of 359 days and 4,572 hours during each 12 months.

The Sunday service as now arranged includes the Central Library and the West End Branch throughout the year. All

the other branches (except the West Roxbury Branch, which has no Sunday service) and the eight largest reading rooms provide Sunday service from November 1 to May 1 only. The hours are as follows:

At the Central Library and West End Branch, from two o'clock to ten o'clock, except that the closing hour is nine o'clock during June, July, August and September. At the other branches (except West Roxbury), and at the eight largest reading rooms (namely, Allston, Codman Square, Broadway Extension, Warren Street, Roxbury Crossing, Boylston Station, City Point, Parker Hill), two o'clock to nine o'clock. At all of these reading rooms, except Codman Square, the room is closed from six to seven o'clock.

The total number of hours of Sunday service provided annually at the Central Library and at the West End Branch is 399 each; at the other branches (except West Roxbury), and at the Codman Square reading room, 182 hours each; and at the following reading rooms, Allston, Broadway Extension, Warren Street, Roxbury Crossing, Boylston Station, City Point, Parker Hill, 156 hours each.

EXTENSION OF THE SUNDAY SERVICE.

In November last the trustees received from the City Council the following resolutions:

Whereas, The Revised Ordinances of the City of Boston, chapter 24, section 1, provide that as a part of the duties of the Trustees of the Boston Public Library they "shall adopt such measures as shall extend the benefits of the institution as widely as possible"; and

Whereas, The public library is now closed Sunday mornings, at a time when, were it accessible to men and women who are obliged to labor through the week, they would enjoy its benefits; now, therefore be it

Resolved, That the City Council of Boston expresses the opinion that the trustees would be conferring a benefit which would be widely appreciated if the main public library were open as early as nine o'clock Sunday mornings, and they are respectfully requested to take steps as early as possible to make such a change; and be it further

Resolved, That the City Clerk be directed to send a copy of these resolutions, together with the vote upon their adoption in each branch of the City Council, to each of the trustees of the public library.

They therefore deem it proper to present here estimates of the additional expense required if the Sunday service is extended.

If the Central Library only is opened throughout the year at nine o'clock instead of two o'clock and closed as at present, the additional expense would be \$6,634.

If the Central Library and West End Branch are opened throughout the year at nine o'clock and closed as at present, the additional expense would be increased to \$7,115.

If besides Sunday service at the Central Library and West End Branch throughout the year as above, the other branches and reading rooms now provided with Sunday service from November 1 to May 1 are opened during those months at nine o'clock instead of two o'clock and closed as at present, the additional expense will be increased to \$9,585.

If the hours of Sunday service are made uniform at the Central Library and such branches and reading rooms as now have Sunday service, that is, if it is provided *throughout the year*, instead of continuing from November to May only at certain branches and reading rooms previously mentioned, the opening hour being nine o'clock and the closing hours as at present, the additional expense will be increased to \$14,255.

Inasmuch as Sunday service is now provided at the branches and larger reading rooms, it is probable that it would not be considered equitable to confine an extension of the service to the Central Library, but that an increase in the number of hours would be required at the branches and at some at least of the reading rooms.

At the time the resolution of the Aldermen and Council, above referred to, was received by the trustees, they had not the means at their command, without impairing the service of the library in other directions, to extend the hours of Sunday opening, even if upon consideration of the matter they came to the conclusion that it was their duty to do so. The matter is being carefully considered by the trustees. They furnished to your Honor, with the usual estimates for the general expenses of the library, as it is now maintained and administered, for the ensuing year, estimates of the expense of extending the hours of opening on the Lord's Day, which are above given. They also suggested to you in answer to inquiries as to what legislation, if any, was desirable with regard to the library, the advisability of asking the General Court for legislation to remove any doubt which now exists as to whether it would be a violation of the law of the Commonwealth to extend the library service on the Lord's Day to the same hours that it is maintained on week days.

They were especially moved to do this by the fact that the District Attorney instituted a criminal prosecution against an

employee of the library for receiving and issuing books and doing other work incident thereto on the Lord's Day some time ago, and that although the employee was after a trial discharged, they are informed that one suggestion made by the Court was, that the work was done in the afternoon at a time in the day not generally appropriated for religious worship. It seems to the trustees that the consideration of the question of opening the library for more hours on the Lord's Day ought not to be embarrassed by the suggestion which is made to them that it would be unlawful. The trustees desire to administer the library service upon the Lord's Day, as upon all other days, within the means at their command, so that it may be of the best service to all the people of the city; and they trust that the question of further opening the library on the Lord's Day will be so fully discussed by the public that there may be no ultimate doubt as to what well-informed public opinion upon that matter is.

HOW THE LIBRARY SYSTEM IS WORKED AS A UNIT.

The great problem in working the library system is to handle and work its collections as a whole. If each branch was operated as an independent library, its work, though important, would be of very much less public benefit than it is when combined with the Central Library, as is done to a large and increasing extent. If a person using any one of the branches desires a book which is not in the branch collection but is in the central collection, application is made by the branch library to the Central and the book is sent to the branch. The same is true of applications at reading rooms. This requires an accurate method of registration of applications, and of entries of transfers and return of books, and the constant supervision of the work by a trained and competent supervisor.

It also requires transportation, and the trustees hire two automobile wagons at an expense of \$5,200 a year, and also use local expresses somewhat in addition, to transport books between the branches and reading rooms and the Central Library, and to engine houses, public institutions and public and parochial schools. In the month of March last nearly 11,000 books were sent to the branches from the Central Library upon such individual applications, and over 3,000 volumes were sent on deposit to the various reading rooms. During the same month over 18,000 books were carried by these wagons from the branches and reading rooms to the Central Library. The state law which is construed as limiting the hours the drivers of these wagons can work to eight hours

a day and not to exceed forty-eight hours a week, limits this method of transportation and makes the service somewhat more expensive than formerly.

LIBRARY CO-OPERATION WITH SCHOOLS, ETC.

The trustees endeavor to co-operate with the educational work of the schools as far as possible without impairing the library service in other directions.

During the past year the library has been daily supplying with books 28 branches and reading rooms, 115 public and parochial schools, 48 engine houses and 29 institutions, and sending out an average of about 400 volumes every day by its delivery wagons. In addition to this the branches themselves and two of the largest reading rooms are sending out books on deposit distributed among 124 places and amounting to over 16,000 volumes annually, of which over 12,000 are sent to schools. That is to say, not only is the collection of the Central Library used as a reservoir from which books may be drawn for use in the branches and reading rooms, but each of the branches and reading rooms is in itself a reservoir from which books are drawn for use by teachers in schools in its immediate vicinity.

This applies not only to books but to photographs and pictures of different kinds mainly for use in schools in connection with the work of the teachers. These are sent out from the Central Library to the branches, and also from the branches to the teachers in their vicinity in portfolios each containing about 25 pictures, which when used by the teachers are returned. These collections consist of illustrations of fine arts, physical and commercial geography, colored views of all countries, types of peoples, industries, transportation, etc. In November last one branch issued 200 pictures in this way, another 350, and another 822. About 10,000 pictures from the branch collections are annually lent to reading rooms, schools and study clubs, and the Fine Arts Department of the Central Library also sends out nearly 700 portfolios of pictures to 85 schools. From the branches and reading rooms about 360 teachers are supplied with books for use in their work, and the school circulation from the branches and reading rooms is over 80,000 volumes a year.

In addition to this the library also provides selected collections of books asked for by teachers to aid them in their work. In October last 30 requests by teachers for books were received at the Central Library, accompanied by lists of books desired, varying in number from 4 volumes to

239 volumes, and 29 similar requests were received where the teacher gave only the subject upon which books were desired. Some of these requests were as follows: "Moths, butterflies and insects. King Arthur and his Knights. Fifty books pertaining to geography and American history. A set of books on Mohammed, the Koran, Ottoman Empire and Sultans. Works of American poets — as many as possible; Works of English poets — a few. A set of books on Africa or United States history. Books on Indians, transportation, days of the 'Forty-niners,' Great Lakes, Mississippi river, homes of people of different nationalities, Hudson Bay Co. A set of books on the colonization and development of the country. Two hundred books, if possible, on Greek history, Greek literature, Greek plays, travel and social life in Greece, Greek art, and English and American fiction, myths of all lands, American literature, nature books. American history from the close of the Revolution to the end of the Civil War."

The work of the library in connection with the schools has rapidly increased during the past few years, and to the extent that it can be done without undue interference with the use of the library by the public, may be properly continued.

The library cannot, however, be made a mere adjunct to the schools without impairing its efficiency for the main purpose for which it is designed and should be maintained for public use. It must also be borne in mind that to the extent that the library aids the schools by doing that which the schools would otherwise be required to do, it adds to its own expenses and correspondingly reduces the expenses of the schools.

The question of how far the library ought, with due regard to its other work, or can, within the appropriations made for it by the City Council, increase this work with the schools is important, and requires constant and careful consideration.

ASSISTANCE TO PERSONS USING THE LIBRARY.

Constant assistance is also given to children and others who come to the library to find books upon subjects upon which they wish information. On a single day in December last 158 children by actual count came into the rooms of a single branch library between three and five o'clock in the afternoon, and this was not regarded as an unusual number.

The following are some of the inquiries recently made for information at one branch during three days:

"Please tell me the author of Kenilworth." "Please tell me the author of Tom Brown at Rugby." "Please tell me the author of The Birds' Christmas Carol." "Please tell me the author of Tom Sawyer."

In connection with literature:

Something on the life of Socrates; on the life of Coleridge; about William Tell; about Robin Hood; on Burns's love of nature.

In connection with geography:

Something on Asia; on Africa, rivers, etc.; about the boys of different countries.

In connection with science:

"Can you give me a book explaining the causes of moisture in the atmosphere?" The origin of the tides. The dragon fly.

In connection with the study of history:

Something on Draco; on the Persian Wars; on the "Holy Crusades"; on Sir Walter Raleigh; on George Washington; on General Custer; on any American leaders or heroes; on the Pequot War; on the English settlers in America; on the Salem witchcraft; about the Lewis and Clark expedition; about Barbara Frietchie. "A book about the Civil War, for a man."

General requests:

Christmas stories, poems, the story of the first Christmas (many times); Life of Christ; New Year's poems; Lives of the Saints (many); St. Nicholas; Life and work of Jean François Millet. "Who was the best author of the life of Napoleon? What a pity Carlyle did not write his life." "Please find" My hunt after "the Captain," Breathes there the man, etc., The discontented pendulum. "Have you the speeches of Henry Grattan?" "Can you give me a Polish book?" "Have you something on phonics?" "Have you something on Whitney's cotton-gin?" "Have you the Directory for 1907?" "Do you have the daily papers?" John Law. His method of finance; nationality of Cooper's mother; enough about the Star Spangled banner for a composition. How does the number of words in Greek compare with the number in English? What does good-bye really mean? All about the Lion of St. Mark's; story of Daniel Boone, for fourth grade; book on initial letters; story of Thor. What books besides stories for a mother to read? Anything on the training of children? Book on the Desolation Islands.

Some of the subjects upon which information was asked by readers at Bates Hall during a few weeks were:

Treatment of the Indians by the United States government; theocratic government of New England; emulsions in three color photography; a dream book to tell the meaning of dreams; picture of a pallium; the habitat of the razor fish; illustrations of flying machines; effects of the district option law; rate of insurance on a building containing a paint shop; Christmas in Spain; identification of a religious order from the dress on a doll; the canon of Ptolemy; "some nice book"; Shakespeare's Taming of the "Crew"; "Casero's essays on senility and friendship" for Cicero's essays on old age and friendship; Mark Antony's Meditations, *i. e.*, Marcus Aurelius Antoninus's Meditations; picture of an apricot for a grocer's label; the Grub Street Journal; coloring of medals; silvering of mirrors; an automobile road book for England; a medical book for a young man studying to be an undertaker; the mail-order business; an occupation adapted to a nervously prostrated man; King Leopold and the Congo; sanctification; veal; Tara and its harp; etiquette of mourning; effect of colors on human conduct; the saloon; Wall street terms; astrology; chiromancy; history of pantomime; education of the nervous system.

On one day in December last readers in Bates Hall asked information on the following subjects:

Polish books. Who predicted the greatness of New York City? History of the United States; Martin's History of Franklin County, Ohio; Shakespeare's songs; vocational schools in Boston; commercial law; Walt Whitman's works; Dead Sea; Lassalle, the socialist; notable Americans; use of egg albumen; home gymnastics; Lowell Institute lectures; United States fisheries; poem of Singing Leaves; glaucoma of the eye; Shakespeare's Henry VIII.; Emma Marshall's novels; French and German indexes of magazines; Russian books; German socialism; electric meters; heads of families in first census of United States; Morse's telegraphic code; Bunyan bibliography; Lieutenant Totten's works; livery companies of London; Scarf's History of Texas; wool waste; water gas; class mottoes; stories for Junior Christian Endeavor work; poetry of the American Revolution; a portrait of Sir Francis Bernard; Milton books; list of public schools in Boston; City of Seattle, Washington; Philippine Islands; life of Nero and newest fiction; foreign menus for Christmas dinners; boys' clubs; climate of Para, Brazil; statistics of deaths in Boston, London, Dresden and Munich; Boston city government; Bigelow genealogy; pictures of wood nymphs; biographies of prominent men of to-day. Who was Gassendi? Open-shelf system in libraries; electrical apparatus; Bible stories; Bible characters; "New Thought" books; forestry bill in last session of Congress; parks; Greek architecture; psychic treatment of nervous diseases; agriculture; American book prices current; telegraphy; East India Company; laundries;

coffee-houses; English heraldry; Greek drama; municipal elections in Boston; United States consular service; signs of the zodiac; predestination; English composition; text-book on zoölogy; hypnotic therapeutics; United States War Department reports.

NEWSPAPERS AND PERIODICALS.

The newspaper room at the Central Library, the papers for which are mainly purchased from the income of a bequest of the late William C. Todd for that purpose, has 355 different papers filed for current reading, of which 267 are in the English language, 16 French, 16 German, 7 Italian, 7 Spanish, 7 Swedish, and the rest in fourteen other languages, including one in Old Hebrew, published in Jerusalem, and one in Tagalese and English, published in the Philippines; also Greek, Russian, Armenian, Polish, Welsh, Hungarian, etc.

One paper at least from every civilized nation, when obtainable, and at least two papers from every state in the union are taken. Among them are papers from Buenos Ayres, Rio de Janeiro, Valparaiso, Melbourne, Sydney, Auckland, Cape Town, Alexandria, Yokohama, Shanghai, Bombay, Calcutta, Hawaii, the Philippines, Cuba and Porto Rico. Fourteen papers are taken from Canada and sixty from Massachusetts. The papers from Boston comprise one in Lettish, three in German, one in Italian, one in Swedish, and all the English dailies and weeklies.

The mere opening, filing and caring for the use of these papers and selecting from them those which are to be bound into files is no inconsiderable task. The Boston papers and also the leading papers from other places are bound and preserved in newspaper files which now include 6,514 bound volumes which are much used. During the last year about 32,000 newspaper volumes were consulted by readers.

One thousand four hundred seventy-seven different periodicals are regularly filed and used in the periodical room at the Central Library, 110 in the Statistical, Music and Fine Arts Departments and in the children's room, making, with the 89 taken at the branches, 1,676 in all. These include all the leading periodicals of the world in every department of literature and science and in almost every language, all of which find ready readers in the periodical room.

French, Germans, Russians, Italians, Spaniards, Poles, Greeks and Scandinavians are among the constant readers who come to the periodical room as the current numbers of those periodicals are received, and the workmen of various trades come regularly to read their trade journals which are not accessible to them elsewhere.

The periodical room is generally filled with readers, and the bound files of periodicals are also extensively used, the largest use being by students from colleges and other schools in the vicinity. Four hundred seventy-seven different volumes were recently consulted in one day by students from a single college, and requests for information from bound volumes of periodicals made to the attendant in charge of the room cover a very wide range of subjects. The following recently made illustrate it:

Ancient Babylon, its social and political condition; modern Turkey and the social revolution there; articles relating to members of the cabinet; poems and pictures on special subjects; secret societies in China; designs for and descriptions of floral pageants; psychotherapy; what Jews have done to promote civilization in England; the course of noted Irishmen in the world; technical information on various subjects; recipes for condiments; material for use in school and college debates.

Periodicals are also taken and on file in the different branches, the largest number being 66 at the West End Branch, and the smallest, 12, at Orient Heights reading room.

INTER-LIBRARY LOANS.

There is another work performed by the library, which, although not extensive, is still important, and that is its participation in what is called the inter-library loans. It frequently happens that a person in another city or town desires a book which his local library does not have, but which the Boston library has. In that case, if the local library makes application to the Boston library, the book will be lent to it upon its responsibility for its care and return, and thus the person who desires it in his own town or city can have the use of it.

In this way there were lent to libraries in the state, during the year 1908, 636 volumes, and to libraries outside Massachusetts, 176 volumes. On the other hand, a person in Boston can by this arrangement obtain in the same way from other libraries books which the Boston library does not have.

CHILDREN'S DEPARTMENT.

One of the most useful departments in the library is required primarily because children are unable to use a catalogue understandingly. Books for children must either be selected for them by some older person, or the children must see the books so that they can select for themselves.

The Central Library and each branch and reading room now have special accommodation for children, and special books and pictures for their use. At the Central Library the care of the children's room, issuing the books, answering questions for information, etc., requires the constant service of a competent and well-trained person. At the branches and reading rooms this work for children is done by the custodian and assistants.

The following requests for help were made of the custodian of the children's room at the Central Library in three days of December last, and the proper books to meet their needs were recommended to the applicants:

Story of the wooden horse; coral; a poem about a boy pardoned by Lincoln; five requests for material on both sides of a debate on Chinese immigration; rules of order for presiding at a debate; music as sound for a composition; Battle of Lexington; information about the buildings and streets of Paris; name of the present secretary of state; material on zinc; Sir William Wallace; a request for "Geology" in which to look up ancestors; story of Roland; story of Bayard; story of the golden touch; Charlemagne; a story to read aloud to a group of children; story of Massachusetts; Life of Lincoln; number of deaths from tuberculosis each month for two years; Christmas plays; a piece to speak in school; pantomimes; a good book to give an elevator boy; a present to a little girl of six; description of Christmas; description of Murillo's paintings; the poem, "Night after Christmas"; many other requests for poems and stories about Christmas.

It is not always possible to furnish the best book on any required subject, as it may be out of the library, and the books suggested are from those available at the time.

EXHIBITIONS OF BOOKS, PICTURES, ETC.

When the Central Library was opened in its new building in 1895 the rare books, engravings and other treasures of the library, which had been before inaccessible to the public, were placed upon exhibition in the fine arts room from time to time. This was found to be of so much public interest that exhibitions of this character are now systematized and programs of them published at the beginning of the winter season in connection with the programs of lectures.

The exhibitions of pictures are mainly arranged to illustrate the library lectures, but outside lectures, such as those of the Lowell Institute, are also illustrated here when practicable, and events either of artistic, historical or national importance

are noticed. Many of the exhibits have been lent by friends of the library, as — issues of the Kelmscott Press, portraits of George Washington, bookplates by Boston artists, prayer books, a collection of valentines, fine book bindings, etc.

Among the historical exhibits may be mentioned those in celebration of the anniversaries of Sebastian Cabot, Americus Vesputius, Hans Holbein, W. L. Garrison, H. W. Longfellow, John Milton, transfer of the Bradford Manuscript, and among important events illustrated, the death of Pope Leo XIII., coronation of Edward VII., the War with Spain, visits to Boston by Admiral Dewey, by Prince Henry of Prussia, and by General Kuroki of Japan, also the Old Home Week of last year, the Grand Army Convention, and the Convention of the American Medical Association.

Exhibitions of pictures are also regularly held in the branches and reading rooms, the program of them being published in the quarterly bulletin. The pictures are mainly furnished from the Central Library and hung upon rods in the branches and reading rooms. They are designed to illustrate matters which are of immediate general interest to the public, like the cruise of the United States Fleet, which was illustrated each month by a different set of pictures of scenes in the different countries visited by the fleet; or subjects which are being studied at the time by persons using the library. The following list of recent exhibitions at one branch and one reading room may be taken as illustrative:

Branch Exhibition.

Mansions of England in the Olden Time; Northern Mythology.

Cruise of the United States Fleet:

The Atlantic Coast of the United States; South America; California; Islands of the Pacific; New Zealand; Australia.

Reading Room Exhibit.

Historic Ornament.

England's history as pictured by famous artists:

B. C. 150—A. D. 1154. 1154—1485, the Plantagenets; Lancaster and York. 1485—1603, the Tudors. 1603—1714, the Stuarts. 1714—1900, the House of Hanover. Alaska and the Esquimaux. Northern Mythology.

LECTURES.

From twenty to twenty-five lectures are annually given in the lecture hall of the library, admission to which is free

to all, and for which no compensation is paid to the persons who lecture. These lectures are mostly on subjects connected with the fine arts, and with special regard to the æsthetic development of cities.

The course of lectures being delivered this season includes among others "A Trip to Brazil," "Art in Photography, with Special Reference to Natural Color," "Modern City Planning," "Civic Centers and the Grouping of Public Buildings," "The Hill Towns of Italy," "The Building Up of Boston," "Constantinople," "A Tour through Greece," "Along the Dalmatian Coast," "On the Study of Art," and "John Milton."

MONEY FOR MAINTAINING AND WORKING THE LIBRARY.

Substantially all the money which the trustees can use for the maintenance and working of the library system comes from the annual appropriation by the City Council. The trust funds, that is, property given to the trustees in trust for the uses of the library, are by law required to be invested by the City Treasurer under the direction of the Finance Committee of the city.

A detailed statement of these funds is annually contained in the report of the City Treasurer and in the report of the City Auditor, and therefore is not presented here. The income received from them in 1908 was \$15,963. This income can only be used for the specific purposes of the several trusts under which it is held, which vary widely. Some are for the purchase of books for separate branches; some for the addition of books to special collections, such as books on government and political economy, books in the Spanish and Portuguese languages, valuable rare editions of books, books of a military and patriotic character, books in memory of specific persons, and in one case only for books published before 1850.

During the past eight years the estimates of the trustees, the recommendations by the Mayor, and the amounts appropriated by the City Council have been as follows:

	Estimates of Trustees.	Amounts Recommended by Mayor.	Amounts Appropriated by City Council.
1901.....	\$291,713 65	\$300,000 00	\$302,000 00
1902.....	310,144 67	305,000 00	300,000 00
1903.....	318,383 10	305,500 00	305,500 00
1904.....	320,414 00	300,000 00	305,000 00
1905.....	325,465 00	310,000 00	310,000 00
1906.....	324,550 00	320,000 00	324,550 00
1907.....	326,100 00	325,000 00	325,000 00
1908.....	332,800 00	325,000 00	310,000 00

CHARACTER OF LIBRARY EXPENSE.

The library is the only great free library for all the people of Massachusetts. The Commonwealth gave the City of Boston a considerable portion of the land upon which the Central Library building stands, upon condition that the building erected thereon, and its contents, should at all times be free to the use of all citizens of the Commonwealth. The result, therefore, is to throw upon the taxpayers of Boston not only the expense of working all the books and material of its library system for the benefit of its own citizens, but also the expense of working much of its books and library material for the benefit of all the citizens of the Commonwealth who desire to use it. Every municipality within fifty miles of Boston naturally governs its own library expenditures for buildings, books and maintenance by this fact. It knows that its people who require the most expensive books, the most valuable library material for their use, will find them in the Boston Public Library, therefore it does not need to provide them itself.

The library is also the only free scholars' library in Massachusetts, that is to say, it is the only free library where scholars can efficiently conduct scholarly research. It is situated at the center of a district containing at least a million and a half people who can by modern means of communication go to the library and use it and return to their homes each day, and many of them do so. The citizen of Lowell or of Taunton, or of any other place within no greater distance from Boston, who wishes to use a library in the preparation of a book, or in some matter of scholarly research, knows that while he may find in the local library there some of the material required, he will not be likely to find sufficient for his purpose and, therefore, he goes to the Boston Public Library, where he finds a larger amount of material than can possibly be given by any other free library in the Commonwealth.

The expense of working so large a library system over the forty-three square miles of the city area is also proportionately greater than the expense of working a small library.

One peculiarity of the working of the library system is that the expense and waste of the working increase disproportionately to the additions which are made to the collection. A library system is like a telephone system, where each additional subscriber disproportionately increases the cost of working the whole system. The expense and waste of efficiently working a collection of a million books is more than ten times as great as the expense and waste of working one

hundred thousand books, because each book is worked in connection with every other.

Again, as it is true that the public library system is of value only as it is used, and that to produce the utmost value from its use it should be used to the limit of its capacity, so it is equally true that the increasing use of it produces a disproportionately greater increase in the expense and waste of working. Books that are transported frequently and over a large area of use wear out proportionately faster than they would if they were transported less frequently and over a smaller area.

Books which are put to general public use wear out very rapidly. Volumes that are purchased at the average price paid for books bought with appropriations by the City Council are not only books which wear out because they are in constant use, but they are necessarily of such paper typography and binding as to wear out rapidly by use. The cost of replacing such books, either with new books of the same kind or with new editions or other books upon the same subject, is very great and causes a great and constantly increasing expense.

PURPOSE OF THE LIBRARY.

The primary purpose of a public library is to educate the people by giving the use of good books and other educational library material to persons who might not otherwise enjoy such use. But it is also of great public importance that the library should within the means at its command afford opportunity for study and research by scholars and students. In doing this our library supplements the work of our public schools and of the university. To most of the graduates of our grammar schools who pass at once into active life, the library stands in place of the high school, the academy and the college, and it is to them a university. In the aggregate of all its services, the Boston Public Library is in itself a system of education for all and free to all.

The distinguishing characteristic of the education given by a public library is that it is not imposed upon the person who has it. The education of the schools is to a greater or less extent imposed upon those who receive it, and it is necessarily general in its character, without regard, to any great extent, to the individual needs of the persons who receive it. The schools must educate persons in classes and upon general lines of knowledge. The library, however, educates only in response to individual wants and demands. Everything that is done by it is done in response to requests from individuals

who ask for that which they each want most. Every one of the million and a half volumes issued by the Boston Public Library in a year for direct home use is issued because some particular person wants that book. Every book consulted in the Central Library or its branches or reading rooms, every newspaper consulted, every manuscript, every picture furnished for use is furnished because some particular person asks for it, presumably because he needs it. It is obvious that education of this kind is likely to be more effective in the development of individuals along the lines in which they are each capable of development than any system of education which deals with individuals in classes, and imposes upon them certain required courses of study.

It was the original design of the wise, sagacious and public-spirited citizens who promoted the foundation of the public library that it should be a means of education for all. Such has been the course of its development up to this time, and such should be its future development. This means constantly increasing appropriations for its support and improvement. The proper maintenance, work and development of the library system requires an annual appropriation of not less than \$350,000. Without this the library will fail to be efficiently worked and improved to its full capacity for the education of our people, and its usefulness will surely decrease. The library cannot simply mark time. It must either march forward, or fall behind in its work.

VOLUNTARY SERVICE AND GIFTS.

One of the most interesting things about the Boston Public Library is the extent to which it has been created, developed and worked by voluntary and unpaid service. It has always been in charge of an unpaid board of citizens as trustees, who have given constant personal attention to all its affairs. Among the many able and public-spirited citizens, former trustees, who have done so much for the library, it is not invidious to mention William W. Greenough, who was a trustee for thirty years, during twenty-two of which he was president of the Board. Upon his retirement his fellow trustees said of him: "He daily devoted to the work of the library as much time and labor as most men devote to their private affairs." Such services by him and by other former trustees now living, as well as those who have passed away, have been more valuable to the library than gifts of silver and gold, and should always be remembered by the people of our city.

The gifts which have been received during the year, as in former years, of books and other library material, have been acknowledged to the givers, and are too numerous to be

detailed here. The only pecuniary gift received during the year has been a bequest of \$5,000 for the purchase of standard Catholic books, under the will of Patrick F. Sullivan, late of Boston.

A large part of the collections of the library have been given to it, while nearly five hundred citizens have served from time to time upon its important Examining Committee, many of whom have given much time and performed excellent service in that capacity. There is no similar institution anywhere which has been promoted and developed by more unselfish, constant and effective civic effort. The city government representing the taxpayers has also been liberal in its appropriations for the support of the library. In its appropriation for the erection of the Central Library building Boston has been munificent beyond any other American city.

LIBRARY SERVICE.

Modern library service is a profession which requires not only accurate technical knowledge and excellent ability but also constant patience and uniform courtesy on the part of those engaged in it. The trustees believe that tested by this standard the service of the library is not excelled by that of any other, and they have much pleasure in repeating the testimony borne in their last annual report to the fidelity, industry and zeal with which the librarian and other persons employed in the various departments of the library have discharged their respective duties.

EXAMINING COMMITTEE.

The trustees appointed an Examining Committee of persons not members of the Board, and joined with them the president of the Board as chairman, to examine the library and make to the Board a report of its condition, as required by the ordinance. That committee consisted of the following persons:

Rev. Joseph G. Anderson.	Mr. J. Allen Crosby.
Miss Frances E. Cawley.	Mr. Pio DeLuca.
Mr. Nathan Haskell Dole.	Mr. Oliver W. Mink.
Mrs. Thomas F. Harrington.	Mrs. Stephen O'Meara.
Miss Bertha Hazard.	Mr. Augustine L. Rafter.
Mrs. George A. Hibbard.	Miss Julia G. Robins.
Rev. Reuben Kidner.	Rev. A. B. Shields.
Mr. Henry Lefavour.	Mr. William G. Shillaber.
Mrs. Alice M. Macdonald.	Mr. Alexander Steinert.
Mr. Francis P. Malgeri.	Mr. Raymond Titus.
Mrs. T. E. Masterson.	Mr. Charles H. Tyler.
Mr. John P. Woodbury.	

The report of the committee is hereto annexed and included as a part of this report. The trustees and the people of the city are under obligations to the persons who as members of this important committee have kindly consented to give their time and attention to the performance of its duties.

CONCLUSION.

In conclusion the trustees beg leave to state that their personal attention has been regularly given to the library during the year. Stated meetings of the Board have been held each week throughout the year except during the summer months, when a committee of the trustees has attended to all matters which required attention. Some one of the trustees, and often more than one, has also visited the library or some of its branches every day to observe its working and aid so far as necessary in the conduct of its affairs.

These duties have been pleasant because the trustees feel that the library enjoys the confidence of the people, and they have found a rich reward for their services in being the honored instruments of conducting an institution which is an ornament and a blessing to the City of Boston.

JOSIAH H. BENTON.

THOMAS F. BOYLE.

WILLIAM F. KENNEY.

SAMUEL CARR.

ALEXANDER MANN.

FINANCIAL STATEMENT.

EXPENDITURES.

Central Library and branches:

To expenditures for salaries:

General administration . . \$177,695 93

Sunday and evening force . . 21,475 05

\$199,170 98

To expenditures for books:

From city appropriation . . \$14,823 73

Trust funds income . . 16,444 68

Carnegie gift, Galatea collection 11 57

31,279 98

To general expenditures:

Newspapers, from Todd Fund income \$2,168 34

Periodicals 3,642 81

Furniture and fixtures . . 3,436 33

Gas 2,299 92

Electric lighting 1,501 01

Cleaning 8,625 39

Small supplies 2,691 08

Ice 216 26

Stationery 1,120 71

Rents 12,733 61

Fuel 10,342 60

Repairs 3,341 70

Freights and cartage . . 1,439 48

Transportation between central and branches 4,184 87

Delivery station, rent and service 916 63

Telephone 423 32

Postage and telegrams . . 1,197 57

Typewriting 10 93

Traveling expenses (mainly street car fares on library service) 217 14

Grounds 69 08

Lecture account (lantern slides and operator) 310 85

Miscellaneous expense . . 16 45

60,906 08

Carried forward \$291,357 04

<i>Brought forward</i>		\$291,357 04	
Printing Department:			
To expenditures for salaries	\$7,309 50		
To general expenditures:			
Stock	1,442 45		
Electric light and power	264 10		
Contract work	267 17		
Rent	470 68		
Freights and cartage	257 17		
Insurance	220 53		
Gas	220 17		
Cleaning	32 50		
Small supplies, stationery, ice, repairs, furniture and fixtures,	37 26		
		10,521 53	
Binding Department:			
To expenditures for salaries	\$22,976 00		
To general expenditures:			
Stock	1,502 67		
Electric light and power	55 30		
Contract work	59 45		
Rent	837 28		
Freights and cartage	255 00		
Insurance	195 75		
Gas	51 19		
Cleaning	32 50		
Small supplies, stationery, ice, repairs	27 31		
		25,992 45	
To amount paid into City Treasury:			
From fines	\$5,548 05		
Sales of catalogues, bulletins and lists	125 02		
Commissions for use of telephone, Sales of waste paper and other waste material	99 88		
Money found in the library	53 22		
	7 14		
		5,833 31	
To balances, January 31, 1909:			
Trust funds income on deposit in London	\$2,774 64		
On deposit, Baring Bros., Ltd.	72 75		
Accrued interest on bank deposits, Accrued income, Center Fund real estate	2,186 17		
Trust fund income balance, City Treasury	2,546 18		
Carnegie gift for Galatea collection,	14,346 37		
	100 00		
		22,026 11	
			<u>\$355,730 44</u>

RECEIPTS.

By city appropriation, 1908-09 . . .	\$310,000 00	
Income from trust funds . . .	15,963 00	
Interest credited on bank deposits, . . .	132 75	
Payment received for books lost . . .	258 00	
Income from Center Fund real estate	1,291 34	
Carnegie gift for Galatea collection	100 00	
		\$327,745 09
By balances brought forward February 1, 1908:		
Trust fund income on deposit in London	\$2,861 92	
On deposit, Baring Bros., Ltd.	72 75	
Accrued interest on bank deposits, ...	2,103 47	
Accrued income, Center fund real estate	1,254 84	
Trust fund income balance, city treasury	15,859 06	
		22,152 04
By receipts:		
From fines	\$5,548 05	
Sales of catalogues, bulletins and lists	125 02	
Commissions for use of telephone, ...	99 88	
Sales of waste paper and other waste material	53 22	
Money found in the library.	7 14	
		5,833 31
		<u>\$355,730 44</u>

REPORT OF THE EXAMINING COMMITTEE.

To the Trustees of the Public Library of the City of Boston:

The Examining Committee report to you as follows:

The committee was called together by the president of the Board of Trustees, Josiah H. Benton, who read the ordinance prescribing the duties of the committee, and suggested that to insure entire independence of action the committee should organize with its own special chairman, and such subcommittees as its officers might see fit to appoint.

The committee then organized by the choice of Rev. Reuben Kidner as chairman, and Mrs. Stephen O'Meara as secretary, and the appointment of the following subcommittees:

ADMINISTRATION.

Mr. John P. Woodbury, *Chairman*.
 Mr. Pio DeLuca. Mr. Alexander Steinert.
 Mr. Raymond Titus.

BOOKS.

Mr. Nathan Haskell Dole, *Chairman*.
 Mrs. George A. Hibbard. Mr. Francis P. Malgeri.
 Mr. Henry Lefavour. Mr. Oliver W. Mink.

BRANCHES.

Mr. Henry Lefavour, *Chairman*.
 Mr. J. Allen Crosby. Mrs. Alice M. Macdonald.
 Miss Frances E. Cawley. Mr. Augustine L. Rafter.

CATALOGUES.

Rev. Joseph G. Anderson, *Chairman*.
 Mr. Raymond Titus. Mrs. Stephen O'Meara.
 Mrs. Thomas F. Harrington. Mr. Pio DeLuca.
 Mrs. T. E. Masterson. Mr. J. Allen Crosby.

FINANCE.

Mr. Charles H. Tyler, *Chairman*.
 Mr. Oliver W. Mink. Mr. Alexander Steinert.

PRINTING AND BINDING.

Mr. J. Allen Crosby, *Chairman*.

Mrs. T. E. Masterson.

Mr. William G. Shillaber.

Mrs. George A. Hibbard.

Mr. Oliver W. Mink.

Rev. Joseph G. Anderson.

Mr. Alexander Steinert.

FINE ARTS.

Mr. Nathan Haskell Dole, *Chairman*.

Mrs. Thomas F. Harrington.

Miss Julia G. Robins.

Miss Frances E. Cawley.

Rev. A. B. Shields.

Mr. Pio DeLuca.

The Examining Committee, through these subcommittees and at general meetings of the whole committee, has examined the library. It finds its condition, except in respect to the matters hereinafter noted, to be satisfactory, and the organization of its employees to be well adapted to the proper conduct of its affairs.

The committee has examined specially into the financial needs of the library by the subcommittee on finance, whose report, adopted by the whole committee, is as follows:

The subcommittee on finance has investigated certain features connected with the financial needs of the library to which it deems it wise to direct attention.

It is difficult to compare the library as it exists to-day with the conditions existing prior to 1890 in great part because of the fact that a few years after the Copley square building was first occupied in 1895, the library system, as a whole, was reorganized, new departments were provided and the collections of books in particular were enlarged in a marked degree. Accordingly the comparisons which your committee has made are based upon the conditions existing in 1900, when, generally speaking, the system now being maintained had been perfected. Starting with 1900, therefore, the committee finds that, with the population in that year of 560,892, the appropriations for the uses and purposes of the library were \$290,766, or 52 cents per capita of our population. There were in that year 63,163 library cards outstanding, which entitled the holders to the use of books at their homes and on which there was a circulation of 1,176,837 volumes. Accordingly 11.26 per cent of the population was then provided with cards and the circulation was equal to 18.6 volumes for each individual holder.

As indicating, in some degree, the extent to which the demands upon the library have been increased, your com-

mittee finds that in 1908, with a population of 628,483, as near as can now be estimated, the appropriations for library purposes were \$310,000, or 49 cents per capita of our population. The "home use" library cards now number 85,085, on which the circulation has aggregated 1,555,027 volumes.

We have, therefore, for this period, extending over eight years, these interesting comparisons to consider, namely, that the population has increased by 67,591, or by 12 per cent; that the library appropriations have increased by \$19,234, or by 6.6 per cent; that the number of "home use" library cards outstanding has increased by 21,922, or by 34.7 per cent, and that the circulation on such cards has increased by 378,190 volumes, or by 32.1 per cent.

It has not been possible for the committee to ascertain the extent to which our population has been increased by the non-English-speaking immigration during these years, but those who are in any degree familiar with the processes by which a given section or subdivision of our city is changed or altered will realize and reflect upon the educational needs of those who have come amongst us and upon the obligations which rest upon those who are charged with the duty of considering and, following the traditions of our city, of providing for them. What may be true of the non-English-speaking classes may be true also, though possibly in a somewhat less conspicuous degree, of those who come from those sections abroad where our own tongue is spoken. But, whatever may be the reasons, it must be evident from the comparisons which we have adduced that certain elements in our population — whether because of the changes in its constituents, or because of the limitations of their individual possessions, or because of other factors — are making demands upon our library and its facilities which the increase in our population does not explain.

A review of the conditions affecting our school attendance and some consideration of the city's efforts to meet the obligations which are made upon it in that direction will serve to emphasize the features to which we wish to direct attention, for, while in 1900 there was a school population of 90,144, requiring appropriations for school purposes — including the compensation for supervisors, teachers and janitors, the cost of fuel, textbooks and school supplies, but excluding the expenditures for the construction and repairs of buildings — of \$2,616,102, or \$29.02 for each scholar, or \$4.66 for each individual of our population, such appropriations had been increased in 1908 so that for that year, with a school population of 111,450, they amounted to \$3,514,133, or \$31.53 for

each scholar, or \$5.59 for each individual of our population. There was accordingly, with an increase in the number of our scholars of 21,306, or 23.6 per cent, an increase in the appropriations of \$898,031, or 34.3 per cent, an increase in the average expenditures for or on account of each scholar of \$2.51, or 8.6 per cent, and an increased charge of 93 cents for each individual of our population, or 20 per cent.

The conclusions to be derived from a study of these figures tend to establish, it would seem, the fact which we wish to make impressive, that there is a demand upon our library for educational purposes not unlike that which is being made upon our public school system and which, we believe, is deserving of the most careful and painstaking consideration.

How, for instance, can an increase in our population during this period of 12 per cent, an increase in our school census of 23 per cent, an increase in our school appropriation of 34 per cent be reconciled with an increase of 34.7 per cent in the number of "home use" library cards and an increase of 32.1 per cent in the circulation of volumes upon them, when the increase in the appropriations for the library system is equal to but 6.6 per cent?

Bearing in mind then the increased demands upon its facilities which the changes in the character of our population have brought about and bearing in mind also, and as equally important, the closer relation which such facilities are sustaining to the educational institutions of our city, whether publicly or privately maintained, it must be evident that these facilities are being subjected to a strain which needs now to be carefully considered from the view points, first, of what may be presently necessary to meet any deficiencies in their value; second, of what should be done to continue with uninterrupted efficiency the work which has thus far been undertaken, and third, of the extent to which the expectations of our community may and should be met, for we are of the opinion and are agreed that our citizens generally desire its representatives to so apportion their resources that the library shall not only be maintained but so that it shall be extended and enlarged and made to correspond, as the years advance, with their reasonable wants and needs in these directions.

The committee desires to add that in making these suggestions it is not unmindful of the demands, as a whole, which are made upon the city's purse and of the efforts which are being made, and in which as individuals they are glad to co-operate, to retrench and to limit the sum of its annual budget. The suggestions which it makes, therefore, are made with due regard to the obligations which naturally suggest themselves,

and they are urged only in the hope that with the exercise of discriminating judgment the appropriations for the library may be made sufficient to maintain it on a proper and dignified level, since, as our investigations lead us to believe, it is now more than ever a co-ordinate feature of our educational system and less than ever, relatively at least, a bureau given over to the circulation of that which is frivolous in literature.

We invite attention to the table which follows:

	1900.	1908.	Increase.	
Population	560,892	628,483	67,591	12 %
School attendants	90,144	111,450	21,306	23.6 %
School appropriations	\$2,616,102	\$3,514,133	\$898,031	34.3 %
Dollars per scholar	\$29.02	\$31.53	\$2.51	8.6 %
Dollars per capita	\$4.66	\$5.59	\$0.93	20 %
Library appropriations	\$290,766	\$310,000	\$19,234	6.6 %
"Home use" library cards	63,163	85,085	21,922	34.7 %
"Home use" circulation	1,176,837	1,555,027	378,190	32.1 %
Library appropriations for each individual of our population	\$0.52	\$0.49	*\$0.03	*6 %
Percentage of cards to population	11.26 %	13.54 %	2.28 %	20.2 %
"Home use" circulation for each individual of our population, in volumes	2.09	2.47	.38	18.2 %
"Home use" circulation for each "home use" card, in volumes	18.6	18.3	*.3	*1.6 %

*Decrease.

Your committee is advised that the average sum received in the way of annual compensation by the employees actively connected with the library, excluding the so-called "ranking officials," is but \$585.34, and that including such officials it is \$670.45. It is manifestly impossible for persons receiving such rates of compensation to create and maintain any adequate fund to which resort can be had in the emergencies of life which confront or are likely to confront them.

Taking into consideration, therefore, the relatively small sums thus paid, and bearing in mind the fact that the service offers little of material promise, we are led to ask, as a result of our reflections, whether it would not be well to direct attention to this matter to the end that some plan may be agreed upon which shall have for its object the creation of a fund for the purpose of providing something in the way of a pension for those who become aged or incapacitated and, possibly, in the way of relief, to some extent at least, for those who are called

upon to bear the burdens which fall so heavily when sickness or death invades the household. We have in our conferences considered the wisdom of suggesting that some part of the sums now being received for fines, imposed where books are kept beyond the prescribed limits,—such sums for the last year amounting to upwards of \$5,000,—be set apart for such purposes, but whether such a suggestion is or is not advisable, the subject in its general aspects is one which, in our judgment, is deserving of consideration.

The subcommittee on books finds, and the general committee reports, that a very large number of books require binding at once. Many of these are books of value, containing plates and maps, which if not secured by binding may be lost and the value of them practically destroyed. The committee is of the opinion that the interests of the library imperatively require that a very considerable sum of money should be applied to the repair and rebinding of books, as soon as it can be made available for that purpose without reducing the necessary work of the library in its general public service.

The subcommittee on the Catalogue Department reported to the general committee that it was much impressed by the amount of work done by that department, but was surprised to find how quickly catalogue cards become soiled and unfit for use, and expressed a regret that the economy practiced required that cards should be patched and repaired instead of being replaced by new ones.

The subcommittee on branches and reading rooms visited by one or more of its members the branches and reading rooms. It reports that the work of the branches is well planned and administered with economy and efficiency. The branches and reading rooms represent the larger popular use of the library. Through them its resources are brought near to the homes of the people, and the use of the library for public education is widely extended. About three-fourths of the circulation of the library is through the branches and reading rooms. They have nearly half the employees of the library, and are maintained with less than one-third of the annual expense for the entire library system. Too much cannot be said in commendation of this part of the library service to the people of the city.

The committee finds, however, that in the material equipment of the branches and reading rooms there are many and urgent defects and needs which ought to be cared for at once, and which we are convinced the trustees are anxious to remedy, but with the present limited appropriation no progress whatever can be made in this direction. More ample accommoda-

tions at some points and entirely new quarters at others are desirable, and in fact in some cases absolutely needed. The situation cannot be regarded as satisfactory until each district of the city has a well-equipped library building for a branch library, with separate rooms for children, and has, so far as necessary, comfortable and attractive reading rooms at the various centers of population.

Nevertheless the most pressing need in all the branches to-day, and one which ought first to be met, is a larger number of new books. The usefulness of the library is not strictly proportional to the number of books on its shelves but to the number of books which the people wish and are willing to read. It is not simply a question of fiction, though there is much to be said with regard to the desirability of furnishing the people with good books of this character. It would be well if more books of fresh and timely interest could be placed in each of the branches, but this would entail increased expense not at present possible without impairing the general library service.

REUBEN KIDNER,
Chairman.

REPORT OF THE LIBRARIAN.

To the Board of Trustees:

I respectfully submit my report for the year ending January 31, 1909.

REPAIRS AND IMPROVEMENTS.

The diminished appropriation for the administration of the department has made it necessary to restrict closely the expenditures for general repairs. Only those things have been done which could not be deferred without serious detriment. At the Central Library all the exterior window and door frames were repainted; at the West End Branch the interior of the building has been painted and renovated throughout, and the reading tables and chairs refinished; extensive repairs have been made upon the roof at the Brighton Branch; and at the South End Branch the old furnaces, comprising part of the heating apparatus of the building, were renewed by the replacement of parts that had become defective, and the basement put in good order.

At the Dorchester Branch an extension to the building, built by the Public Buildings Department without expense to the library, provides about 525 square feet of additional floor space for our use, an improvement that was much needed, and it was found possible in connection with this extension to provide an emergency exit from the children's room in the third story.

Minor repairs and improvements have been carried out at the Roslindale reading room, and our landlords have repainted the reading rooms at Mt. Bowdoin, Broadway Extension, Warren street and North street. The purchase of new furniture and other equipment needed at some of the branches and reading rooms has been deferred on account of the restricted appropriations.

The Allston reading room was removed to a new location on the first of May. The room now occupied at 6 Harvard avenue is not only larger than the old one but is more centrally located, advantages which were immediately reflected in an increased circulation and a larger use of the reading tables.

Curtis Hall, occupied for many years by the Jamaica Plain Branch, was destroyed by fire December 15. Temporary

quarters for the branch, restricted in size but nevertheless fairly serviceable in the emergency, were immediately secured in the Masonic Hall Building not far from the old location, and the branch was reopened there December 28. Fortunately the books and furniture were preserved from fire, although about 3,000 volumes were somewhat damaged by water, requiring rebinding in part.

THE USE OF BOOKS.

The table on page 45 shows the circulation for home use and through schools and institutions for the year, in detail, for the Central Library and the various branches and reading rooms throughout the library system.

It should be borne in mind that these figures *do not include the extensive and constantly increasing use of books throughout the library system within the buildings.* This reading and reference use is not recorded statistically, and the tables of circulation do not include the reading-room use of periodicals and newspapers, nor the departmental use of the volumes relating to patents, nor the material circulated from the Fine Arts Department.

The use of books and other library material within the buildings has always been an important feature of this library. It increases from year to year as the relation of the library to the schools and higher educational institutions becomes more close. As it increases, it in some degree reduces the number of volumes taken out for home use, especially books required in educational reference work. Since this use is not measured by figures, we lose the weight of its statistical importance in comparison with the returns of some other libraries where a different plan is followed in presenting data as to circulation.

	Home Use.	Schools and Institutions.	Totals.
CENTRAL LIBRARY:			
a. Direct	308,178		
b. Through branches and reading rooms,	83,957		
c. Schools and institutions through Branch Department		62,365	
Total			454,500
BRANCHES:			
Brighton	39,491	6,718	46,209
Charlestown	45,273	8,732	54,005
Dorchester	43,197	5,371	48,568
East Boston	85,546	8,108	93,654
Jamaica Plain	45,097	3,285	48,382
Roxbury	75,270	8,376	83,646
South Boston	93,023	6,902	99,925
South End	87,582	8,606	96,188
Upham's Corner	76,981	585	77,566
West End	149,694	959	150,653
West Roxbury	32,904	4,328	37,232
READING ROOMS:			
A. Lower Mills	13,176		13,176
B. Roslindale	40,304	80	40,384
D. Mattapan	10,138		10,138
E. Neponset	14,400		14,400
F. Mt. Bowdoin	27,236		27,236
G. Allston	28,999		28,999
J. Codman square	43,590		43,590
N. Mt. Pleasant	21,580		21,580
P. Broadway Extension	26,562		26,562
R. Warren street	25,964		25,964
S. Roxbury Crossing	20,297		20,297
T. Boylston Station	25,170		25,170
W. North Bennet street	12,616		12,616
Z. Orient Heights	10,276		10,276
22. North street	7,574		7,574
23. City Point	38,131		38,131
24. Parker Hill	22,821		22,821
Totals	1,555,027	124,415	1,679,442

The variations in circulation by months, so far as relates to the Central Library, are shown in the following table, compiled by Mr. Frank C. Blaisdell, chief of the Issue Department:

Circulation from Central by Months.

	Home Use Direct.	Home Use through Branch Department.	Schools and Institutions through Branch Department.	Totals.
February, 1908.....	31,788	9,827	6,493	48,108
March, "	34,055	10,459	6,518	51,032
April, "	27,371	7,826	6,284	41,481
May, "	24,716	6,257	6,254	37,227
June, "	12,297	4,978	4,116	28,391
July, "	16,888	4,169	2,206	23,263
August, "	18,250	4,059	2,128	24,437
September, "	19,897	4,573	3,804	28,274
October, "	26,583	6,958	5,720	39,261
November, "	30,456	7,961	5,572	43,989
December, "	27,395	8,269	6,421	42,085
January, 1909.....	31,482	8,621	6,849	46,952
Totals.....	308,178	83,957	62,365	454,500

To bring the full effect of these figures clearly before the reader a condensation is necessary, as in the following summary:

*Books Lent for Home Use, including Circulation through
Schools and Institutions.*

From Central Library (including Central Library books issued through the branches and reading rooms)	454,500
From branches and reading rooms (other than books received from central)	1,224,942
Total number of volumes lent for home use and through schools and institutions . . .	<u>1,679,442</u>

The usual comparative statements follow, showing the circulation in each of two successive years:

	1907=08.	1908=09.
Central Library circulation (excluding schools and institutions):		
Direct home use	287,165	308,178
Through branches and reading rooms for home use	84,644	83,957
	<u>371,809</u>	<u>392,135</u>
Branch Department circulation (excluding schools and institutions):		
Direct home use:		
From branch collections	742,565	774,058
From reading room collections	303,458	388,834
	<u>1,046,023</u>	<u>1,162,892</u>
Schools and institutions circulation (including books from central through the branch system)	111,279	124,415
Totals	<u>1,529,111</u>	<u>1,679,442</u>

To record statistically the use of books within the buildings would require methods which would often delay readers or restrict the freedom of circulation from the open shelves, and the results would not offset these disadvantages.

The issue of books from the Central Library on individual applications sent forward through the branches and reading rooms outside the central aggregates 83,957 volumes, a decline of 687 for the year. The number of volumes supplied in this way has been declining for some months. This decline is due to our inability to furnish the books asked for, under our present financial limitations. Circulation in general is directly affected by the supply of new books, not only current publications which are always in urgent demand, but also books bought to replace others which are worn out, and additional copies of books already in the library. Therefore since the purchase of books has necessarily been much restricted during the last six months of the year, a decline in the number of volumes lent for home reading is to be expected. The effect of the reduced appropriation upon the

supply of books acquired for the branches, and therefore upon circulation, may be inferred from the following statement contained in the annual report of Mr. Ward, the supervisor of branches:

The branches have had 3,653 volumes of new books this year, as against 4,408 in 1907-08. They have had replacements to the number of 2,148 volumes, as against 2,448 the year before. During the last half of the year only Charlestown, Roxbury and South Boston Branches, where special funds were available, have had any replacements, and the other eight branches have had few new books. The reading rooms have been better supplied than the branches, and the additions to their permanent collections amount to 5,259 volumes, as against 3,160 in 1907-08. Almost no new books, however, have been bought for the reading rooms during the last eight months.

A considerable number of duplicates were bought last May for the branches and reading rooms and for the deposit collection, and were of the greatest use.

The reading rooms have suffered because it has not been possible in a long time to make additions to the deposit collection, on which they depend to a large extent. The number of volumes on deposit at eight of the reading rooms has been increased a little, chiefly by utilizing very old fiction and other books not in active demand. But the additions to the permanent collections, in the early part of the year, have been a compensation for the deficiencies of the deposit collection.

The problem of an adequate supply of books for the reading rooms is a serious one. To take an example,—there is one reading room which has a direct home use of 19,000 volumes a year. For books to meet this demand it has 600 volumes in its permanent collection, chiefly, though not entirely, books of reference. A part of these are not issued for home use. It has also a deposit of 500 volumes from the Central Library and one of 300 volumes from a neighboring branch. There are, consequently, about 1,400 volumes in the collection. In winter so many books are out at certain times that the shelves seem almost empty, and demands for special books have little chance of being satisfied. Here the daily issue from the Central Library, and in this case from a neighboring branch, comes in as a help. This reading room draws 6,000 volumes a year from these two sources, on individual applications, in addition to its direct issue of 19,000 volumes. But the requests which could not be met with the books desired amounted to about 60 per cent of the number received. It is doubtless true that popular demands for books can never be satisfied, and that a collection of a few hundred volumes for general reading, in connection with the daily issue from the Central Library, is perhaps enough. But a considerable further duplication of the classic books, both those for adults and for children, would be most desirable

for the reading rooms, if the appropriation of money for the library permitted it. The collection of an active reading room might very well be 2,000 volumes as a minimum.

The percentage of adult fiction in the books issued for direct home use from the Central Library through the branches was 30.9 and from the eleven branches direct, 34.9. Books borrowed by juvenile readers for home use, classed as fiction, constituted 35.7 per cent of the total issue from the Central Library through the branches, and 35.9 per cent of the issue from the eleven branches direct. The percentages of the adult and juvenile fiction respectively, in the direct circulation for home use from the Central Library, although not recorded, probably vary little from these figures.

The statistics of circulation are presented in continuation of a series of tables which have, from year to year, appeared in our reports. They are comparable with similar figures relating to our own library, computed on the same basis in successive years, but they are not comparable with statistics from other libraries, unless possible differences in recording circulation, or in local conditions, are borne in mind, a discrimination which is often practically impossible.

Such statistics are frequently given an unwarranted importance. The character of the books circulated is far more significant than the mere number. A single book used by a few persons only may result in promoting the social benefits for which a public library primarily exists to a greater extent than fifty or one hundred books of a different kind which may have a wide circulation.

Nor can the statistics of circulation of one library be compared with those of another for the purpose of drawing conclusions as to the relative efficiency of the two institutions, or as to the relative economy shown in their operation. Several such comparisons have recently appeared, in which circulation is computed per capita of population, while in other instances the cost per volume circulated is computed by dividing the entire cost of library maintenance by the number of volumes lent for outside use, disregarding all the other work performed by the library. Every large reference library renders a great deal of service not chargeable to "circulation" as that term is generally used. The cost of "circulation" cannot well be separated so as to be figured per volume. The amount of general service performed, the aggregate number of hours of service per week, the extent and character of the area over which the library operates,—these and other items affect the aggregate expense and, as a matter of course, affect the cost per volume "circulated," if, as is

usually the case, this entire cost is charged against outside circulation only. As for circulation per capita, much depends upon the proportion of non-English-speaking persons in the population, the number of books in other languages than English provided for their use, the number of recent additions to the population of persons who have not yet acquired the habit of reading, the number of persons in the community able to buy the books they need, the number of other libraries open to the same population, and upon the number of the popular books of the day, especially fiction, provided for borrowers.

Statistical comparisons between libraries are usually futile. There are hardly two operating under similar conditions, and since the figures are always affected by the personal equation, differences which vitiate the comparison are certain to be ignored.

Such parallels are sometimes instituted as a sort of special pleading, for the purpose of putting one institution in a more favorable light as compared with another than would otherwise appear; and even if the figures contain an element of truth, they are often so distorted in the manner of presentation that the net result is misleading.

Without entering into a discussion of whether or not a large proportion of fiction ought to be bought, every one knows that the demand for current fiction is insistent, and that it would be perfectly easy, by catering to this demand, to increase the circulation to any desired extent, thereby increasing the circulation per capita and somewhat diminishing the expense per volume circulated, without materially increasing the real efficiency of the library.

It is equally well known that circulation can be promoted by various other expedients, more or less legitimate, if the object is merely to get a large number of books into the hands of borrowers. The expression "hands of borrowers" is used advisedly. Not all books circulated are read, and of those read still fewer are digested.

A public library is a social institution, and its value to the city or town which maintains it depends upon the success with which it fills its peculiar place in its own community, promoting through the use of books a better citizenship. To stimulate circulation to this end rather than to promote a large circulation should be its first object, since, unfortunately, the two things are not synonymous.

BOOKS RECEIVED.

The effect of the restricted general appropriation for the library is clearly seen in the following statistical statement of purchases, covering two successive years:

Books Acquired by Purchase.

	1907-08.	1908-09.
For the Central Library:		
From city appropriation	11,255	3,478
From trust funds income	2,162	3,868
	<u>13,417</u>	<u>7,346</u>
For branches and reading rooms:		
From city appropriation	12,953	3,542
From trust funds income	268	1,604
By Fellowes Athenæum	819	640
	<u>14,040</u>	<u>5,786</u>
Totals	<u>27,457</u>	<u>13,132</u>

As will be noted, the accessions by purchase show a reduction in number of volumes from 27,457 in 1907-08 to 13,132 in the year just closed. The purchases by the Fellowes Athenæum were added to the collection at the Roxbury Branch, under the terms of the agreement between the trustees of the Athenæum and the library.

The accessions in detail, whether by purchase, gift or exchange, are shown in the following statement:

	Central, Volumes.	Branches, Volumes.	Total, Volumes.
Accessions by purchase	7,346	5,146	12,492
Accessions by gift	5,847	316	6,163
Accessions by exchange	588	.....	588
Accessions by Statistical Department	666	.....	666
Accessions of periodicals (bound)	1,632	393	2,025
Accessions of newspapers (bound)	341	.....	341
Accessions by Fellowes Athenæum . . . . .	.....	656	656
Totals	<u>16,420</u>	<u>6,511</u>	<u>22,931</u>

The total number of accessions, as shown in this statement, is 22,931, as compared with 40,742 in the preceding year.

PROSE FICTION.

Of current fiction 887 volumes have been carefully examined, and 93 titles selected for purchase. Of these 93

titles 1,074 volumes have been bought for the central and branch collections, costing \$1,015.06, the smallest amount that has been expended for current fiction since 1897, when the present method of recording such purchases was instituted. Under the limitations affecting all purchases, the expenditure for fiction could not have been materially increased. Urgent replacements of worn-out books in the fiction class required the purchase of 3,393 volumes, at a cost of \$2,544.75, bringing the total expenditure for fiction to \$3,559.81, or 11.38 per cent of the aggregate expenditure for books.

NOTEWORTHY ACCESSIONS.

From the report of Miss Theodosia E. Macurdy, chief of the Ordering Department, the following details are taken, relating to the more important accessions during the year:

Purchases.

With the exception of a few volumes obtained by exchange, the following titles represent expenditures entirely from trust funds income.

- Budge, E. A. T. W., editor and translator. The lives of Mabâ Seyôn and Gabra Krestôs. (The Ethiopic texts edited with an English translation and a chapter on the illustrations of Ethiopic MSS.) London. Griggs. 1898. (Lady Meux manuscripts. No. 1.)
- The miracles of the Blessed Virgin Mary; and the life of Hannâ (Saint Anne), and the magical prayers of 'Aheta Mikâêl. (The Ethiopic texts edited with English translations, etc.) London. Griggs. 1900. (Lady Meux manuscripts. Nos. 2-5.)
- Collectanea de rebus Hibernicis. Edited by Charles Vallency. Dublin. White. 1786-1804. 6 vols. Portraits. Plans.
- Curwen, Alice. A relation of the labor, travail and suffering of that faithful servant of the Lord, Alice Curwen. Who departed this life . . . 1679 . . . (London.) 1680. (A testimony to the memory of the wife of Thomas Curwen, a Quaker minister, who with his wife was imprisoned in Boston while visiting America.)
- Darcel, Alfred, and Henri Delange. Recueil de faïences italiennes des XVe, XVIe, et XVIIe siècles, dessiné par Carle Delange et C. Borneman. Paris. 1869. 101 colored plates.
- Essling, Victor Masséna. Études sur l'art de la gravure sur bois à Vénise. Les livres à figures vénitiens de la fin du XVe siècle et du commencement du XVI. Florence. Olschki. 1907-08. 2 vols. Folio.

- Faden, William. (A collection of plans [7] of operations of the British troops against the rebels in America.) 1771-1781.
- Lévaiant, François. Histoire naturelle des oiseaux d'Afrique. Paris. Delachaussee. 1805-1808. 6 vols. Plates. Folio.
- Massachusetts Spy (The), or Thomas' Boston Journal. Sixty-three numbers distributed among vols. 1-4, 1770-75.
- New England Primer Improved. For the more easy attaining the true reading of English. Boston. Printed by D. and J. Kneeland, for Samuel Webb, in Cornhill. 1764.
- Nuntiaturberichte aus Deutschland, nebst ergänzenden Aktenstücken. Herausgegeben durch das K. preussische historische Institut in Rom und die K. preussische Archiv-Verwaltung. 1553-1630. Berlin. Bath. 1892-1907. 8 vols. (Documentary history of the Roman Catholic Church in Germany in the sixteenth century.)
- Scottow, Joshua. Old men's tears for their own declensions, mixed with fears of their and posterities further falling off from New England's primitive constitution. (Anon.) Boston. Printed in the year 1691. Reprinted for B. Gray. 1733.
- Secker, William. A wedding ring fit for the finger; or, the salve of divinity on the sore of humanity . . . Boston, printed by S. G. for B. Harris . . . 1690.
- Seeböhm, Henry. A monograph of the Turdidae, or family of thrushes. Edited and completed (after the author's death) by R. Bowdler Sharpe. London. Sotheman & Co. 1902. 2 vols. Colored plates.
- Wartburg (Die). Ein Denkmal deutscher Geschichte und Kunst dem deutschen Volke gewidmet von Grossherzog Carl Alexander von Sachsen. Dargestellt in Monographien von Carl Alexander Grossherzog von Sachsen-Weimar-Eisenach . . . und in 706 authentische Abbildungen im Text und auf 54 Tafeln bearbeitet vom Herausgeber Max Baumgärtel. Berlin. 1907.

There was also purchased a collection of books for the blind in New York point, consisting of seventy-one volumes of fiction, history and biography; a collection of music scores by modern composers; and the concluding volume (5) of the Crown collection of photographs of American maps (from originals in the British Museum).

Gifts.

Of the gifts received in 1908-09, the following list comprises the notable books and collections of books:

- Anonymous. (In memory of Arthur Mason Knapp.) Briquet's Les filigranes. Dictionnaire historique des marques du papier. Four volumes, handsomely bound in half morocco. Paris. 1907.

- Bixby, William K., St. Louis. Letters of Zachary Taylor from the battlefields of the Mexican War. (Reprinted from the originals in the collections of W. K. Bixby.) Privately printed. 1908.
- Boston Browning Society. Fifteen volumes, including the first edition of Browning's *Gold Hair*, 1864; also a manuscript letter from F. J. Furnivall, for the Browning Collection.
- Brown, Allen A. Two hundred and nineteen volumes for the Brown Collection of Music.
- Fitz, Mrs. W. Scott-. One hundred and seventy-five volumes, a miscellaneous collection.
- Freeman, James G. One hundred and eighteen volumes, a miscellaneous collection, and 206 periodicals.
- Gay, Estate of Mrs. Elizabeth G., through Mr. Ernest L. Gay. One thousand and fifty-seven volumes of standard English literature.
- Gay, H. Nelson, Rome. Four hundred volumes of Italian literature, chiefly political history, from the library of Francesco Crispi.
- Grew, Mrs. Henry S. One hundred and twenty-one volumes, a miscellaneous collection.
- Hopkins, Mrs. J. C. Two hundred and ninety-one volumes, textbooks and classics.
- Kuhn, Estate of Mrs. Hartmann. Two hundred and seventy-four volumes, history, travels, memoirs, dictionaries, etc.
- Morgan, J. Pierpont. Eleven volumes. Catalogue of manuscripts and early printed books from the libraries of William Morris, Richard Bennett . . . and other sources, now forming a portion of the library of J. P. Morgan. London. Privately printed. 1906-07. 4 vols. Folio.
- Catalogue of the collection of miniatures, the property of J. P. Morgan. London. Privately printed. 1907. 4 vols. Folio.
- Pictures in the collection of J. P. Morgan. London. 1907. 3 vols. Folio.
- Phillips, Mrs. John C. Ninety-seven volumes, a miscellaneous collection.
- Richards, Dr. George E. Seventy-seven volumes, including seventy volumes of rare editions of the classics.
- Moulton, Mrs. Louise Chandler. (Bequest.) Eight hundred and eighty-seven volumes from the library of the late Louise Chandler Moulton. The collection consists, with few exceptions, of autograph copies of the works in prose and verse of contemporary American and English authors, which are especially suited to the Artz and Galatea collections. Some of the books contain, besides the autographs, letters and inscriptions of interest by the authors.
- Shaw, Samuel S. One hundred and thirteen volumes, a miscellaneous collection.

Thomas, George C., Philadelphia, through Mr. J. H. Benton.

(1) Autograph letters and autographs of the signers of the Declaration of Independence in the possession of George C. Thomas. Philadelphia. 1908.

—(2) Catalogue of the more important books, autographs and manuscripts in the library of George C. Thomas. Philadelphia. 1908.

THE CATALOGUE DEPARTMENT.

Mr. S. A. Chevalier, chief of the Catalogue Department, has compiled a summary of the work of the year, so far as it can be shown by figures, as follows:

Number of volumes and parts catalogued	56,426
Titles covered by the foregoing	33,289

Subdivided as follows, in comparison with preceding year:

	1907-08.		1908-09.	
	Vols. and Parts.	Titles.	Vols. and Parts.	Titles.
Catalogued (new):				
Central Library catalogue.....	21,100	15,525	15,784	11,332
Serials.....	8,773	.....	6,928	
Branches.....	10,620	9,367	11,822	10,534
Re-catalogued.....	10,226	5,138	21,892	11,423
Totals.....	50,719	30,030	56,426	33,289

The number of cards added to the catalogues during the year aggregates 171,262, including 140,826 added to the Central Library catalogue and 30,436 to the branches.

The catalogue cards representing music have been separated from the main catalogue in Bates Hall, 106,000 cards having thus been removed. The cards representing medical books transferred on deposit to the Boston Medical Library in the Fenway, about 10,000 in number, have also been removed.

Miscellaneous Work of the Department.

The cataloguing of new books forms only a part of the work of the Catalogue Department. Much re-cataloguing of old material is done every year, and during the past year the library of President John Adams, held in our custody, containing 3,019 volumes, has been catalogued. Copy for a printed author catalogue of this collection is in preparation.

An author list on cards has been made of works recently received from the bequest of Abram E. Cutter, and the final cataloguing is in process.

Three parts of the important catalogue of the Allen A. Brown collection have been issued during the year, bringing it nearly through the letter F.

Other work incidental to the examination of titles, the replacement of soiled and worn-out cards, which need not be detailed here, has been performed by members of the staff.

SHELF DEPARTMENT.

Mr. W. G. T. Roffe, in charge, has prepared the usual statistical tables from which the following condensation is made:

	Volumes.
Placed on the Central Library shelves during the year:	
General collection, new books (including continuations)	15,318
Special collections, new books	2,139
Books reported lost or missing in previous years but now found, transfers from branches, etc.	524
	17,981
Removed from the Central Library shelves during the year:	
Books reported lost or missing, condemned copies not yet replaced, transfers, etc.	4,898
Net gain at Central Library	13,083
Net gain at branches and reading rooms	5,593
Net gain, entire library system	18,676

The total number of volumes available for public use in the library at the end of each year since the formation of the library is shown in the following statement:

1852-53	9,688	1881-82	404,221
1853-54	16,221	1882-83	422,116
1854-55	22,617	1883-84	438,594
1855-56	28,080	1884-85	453,947
1856-57	34,896	1885	460,993
1857-58	70,851	1886	479,421
1858-59	78,043	1887	492,956
1859-60	85,031	1888	505,872
1860-61	97,386	1889	520,508
1861-62	105,034	1890	536,027
1862-63	110,563	1891	556,283
1863-64	116,934	1892	576,237
1864-65	123,016	1893	597,152
1865-66	130,678	1894	610,375
1866-67	136,080	1895	628,297
1867-68	144,092	1896-97	663,763
1868-69	152,796	1897-98	698,888
1869-70	160,573	1898-99	716,050
1870-71	179,250	1899-00	746,383
1871-72	192,958	1900-01	781,377
1872-73	209,456	1901-02	812,264
1873-74	260,550	1902-03	835,904
1874-75	276,918	1903-04	848,884
1875-76	297,873	1904-05	871,050
1876-77	312,010	1905-06	878,933
1877-78	345,734	1906-07	903,349
1878-79	360,963	1907-08	922,348
1879-80	377,225	1908-09	941,024
1880-81	390,982		

These volumes are located as follows:

Central Library	736,158	Roslindale (Station B)	4,910
Brighton	17,268	Mattapan (Station D)	580
Charlestown	21,683	Neponset (Station E)	504
Dorchester	18,771	Mt. Bowdoin (Station F)	2,585
East Boston	15,241	Allston (Station G)	623
Jamaica Plain	15,468	Codman square (Station J)	3,228
Roxbury Branch:		Mt. Pleasant (Station N)	613
Fellowes Athenæum	26,200	Broadway Extension (Station P)	2,705
Owned by city	9,398	Warren street (Station R)	639
Total, Roxbury Branch	35,598	Roxbury Crossing (Station S)	798
South Boston	16,632	Boylston Station (Station T)	672
South End	15,470	Orient Heights (Station Z)	1,094
Upham's Corner	4,219	North Bennet street (Station W), ...	510
West End	14,607	North street (Station 22)	576
West Roxbury	7,163	City Point (Station 23)	1,418
Lower Mills (Station A)	584	Parker Hill (Station 24)	707

PUBLICATIONS.

Under the editorial supervision of Mr. Lindsay Swift the following serial publications have been issued from the library press:

1. Monthly Bulletin, containing 124 pages, edition 5,000 each month, the final issue being that for the month of May.
2. Quarterly Bulletin, three issues; aggregate pages, 200; edition, 2,000 to 3,000.
3. Weekly Book List, each week since April 25; aggregate pages, 228; edition, 2,500.

Besides the foregoing there have been printed and published:

1. A List of Fairy Tales and Folk Stories, contained in the branches; 52 pages; edition, 4,000.
2. A Brief List of Books for Boys and Girls; 12 pages; edition, 9,000.
3. A Short List of Books relating to Abraham Lincoln, for School Use; 6 pages; edition, 9,000.

The list of fairy tales referred to was prepared by Miss Louise Prouty, custodian of the Brighton Branch; the Brief List for Boys and Girls, by a committee of the Boston Home and School Association, of which committee Miss Alice M. Jordan, custodian of the children's room at the Central Library is a member. The list relating to Lincoln was compiled by Miss Jordan.

Special lists in connection with the Lowell Lectures, for the accuracy and character of which the lecturers assume responsibility, have appeared in the bulletins as follows:

1. The Real South. By Prof. Albert Bushnell Hart. (In Monthly Bulletin, March, 1908, pp. 84, 85.)
2. Molière. By Prof. Brander Matthews. (In Quarterly Bulletin, September, 1908, p. 124.)

3. Teachers and Precursors of Columbus. By C. Raymond Beazley. (In Quarterly Bulletin, September, 1908, p. 125.)
4. The Ethical Problem of Freedom and Determinism. By Prof. George Herbert Palmer. (In Quarterly Bulletin, December, 1908, pp. 195, 196.)

THE PRINTING DEPARTMENT.

The publications previously enumerated have been printed in this department, also the Allen A. Brown catalogue, as far as completed, and the following miscellaneous work performed, as drawn from the report of Mr. Francis Watts Lee, chief:

	1907=08.	1908=09.
Requisitions on hand, February 1 . . .	21	13
Requisitions received during year . . .	233	207
Requisitions withdrawn	1	—
Requisitions on hand, January 31 . . .	13	3
Requisitions filled during year	240	217
Card catalogue (central):		
Titles (Printing Department count) . . .	18,678	17,190
Cards finished (excluding extras) . . .	182,039	137,686
Titles in type, but not printed . . .	60	240
Guide cards printed	—	3,600
Card catalogue (branches):		
Titles (Printing Department count) . .	360	424
Cards (approximately)	18,000	33,920
Call slips	2,271,078	1,334,000
Stationery and blank forms	871,982	555,828
Signs	1,286	651
Blank books	61	56

THE BINDERY.

Mr. Frank Ryder, chief of the bindery, reports the following for the year:

Number of volumes bound, various styles	32,999
Volumes repaired	1,943
Volumes guarded	946
Maps mounted	695
Photographs and engravings mounted	5,094
Magazines stitched	217
Library publications, folded, stitched and trimmed . .	171,568

Besides the foregoing a large amount of miscellaneous work has been done as usual, occupying, perhaps one-sixth of the time of the force.

DOCUMENTS AND SUPPLIES.

From the Stock Department at the Central Library, in charge of Mr. George V. Mooney, 134,581 copies of the different library publications have been distributed to the public and to the departments of the library for official and public use. There have also been issued 1,956,000 call slips and 373,500 miscellaneous forms.

REGISTRATION.

Cards entitling the holder to borrow books from the library for home use are issued from the Registration Department at the Central Library, in charge of Mr. John J. Keenan, either directly or through the branches and other agencies of the library, the privilege attaching to each card continuing during a period of two years from the date of issue, unless suspended for the nonpayment of a fine, failure to comply with the rules of the library or other valid reason. At the end of two years from the date of issue, any card may be renewed, provided its holder is still entitled, under the rules, to receive a card. A borrower's card which has not been suspended for nonpayment of a fine or for other reason, and is still held within the two years' term for which it was issued, is termed a "live" card; that is to say, all cards outstanding which are available for use by their holders for the purpose of borrowing books for home reading are "live" cards. No other cards are included in our published statistics of registration. Since all cards expire by limitation at the end of two years from the date of issue, re-registration of borrowers proceeds automatically without other formality than the exchange of an expired card for a new one. Cards are, of course, continually issued, within the two-year period, to replace others lost, soiled or filled with charging dates on books borrowed.

At the close of the year covered by this report there were outstanding 85,085 "live" cards, as compared with 79,662 on January 31, 1908. The gain is in part accounted for by the remission after six months of fines incurred by borrowers under sixteen years of age. The experience of another year confirms the opinion previously expressed as to the wisdom of the change in the rules permitting this remission of fines. On the one hand there has been little if any reduction in the amount of fines collected, and on the other, young readers are not, as formerly, permanently debarred from the home use of our books.

The distribution by wards of the holders of "live" cards is shown in the following table, in comparison with the population:

Classification of Holders of "Live" Cards, by Wards.

WARD NO.	No. of Card Holders.	Population in 1905.	Percent- age of Card Holders.
1.....	1,920	25,405	7.55
2.....	1,680	25,929	6.47
3.....	1,523	14,831	10.26
4.....	1,281	12,499	10.24
5.....	1,396	12,633	11.05
6.....	2,604	29,987	8.68
7.....	2,384	15,579	15.30
8.....	6,309	30,810	20.47
9.....	3,283	22,120	14.84
10.....	6,660	23,841	27.93
11.....	7,616	22,353	34.07
12.....	5,594	21,738	25.73
13.....	1,738	21,654	8.02
14.....	2,689	22,127	12.15
15.....	2,302	20,310	11.33
16.....	2,870	21,924	13.18
17.....	2,406	24,313	9.89
18.....	2,211	22,121	9.99
19.....	2,608	29,213	8.92
20.....	4,914	41,805	11.77
21.....	4,716	26,533	17.77
22.....	3,009	27,769	10.83
23.....	3,471	26,410	13.14
24.....	6,390	31,650	20.18
25.....	3,898	21,806	17.87
Totals.....	85,472	595,380	14.35

The number of "live" cards held by persons over sixteen years of age is 54,129, as compared with 31,343 held by those under sixteen. Cards held by teachers number 4,120; by pupils of elementary schools (public and parochial), 28,625; and by students of higher institutions of learning, 14,016; male card holders number 36,816, and females, 48,656.

All our cards are interchangeable as regards the place wherein the holder may exercise the right conveyed by them. That is, a book may be borrowed on any card at the Central Library or at any branch or reading room in the entire library system, and may be returned, on presentation of the card, *at the place where it was borrowed or at any other station of the library*, at the convenience of the borrowers. This flexibility in the use of the card is of great advantage to the patrons of the library.

The requirement that a borrower's card shall be used in order to obtain a book for home reading, this card carrying a statement of the date of issue and return of the volume, has sometimes been criticised, and its abandonment urged in favor of other forms of recording the transaction. But where interchangeable privileges are given over a wide area, equally valid at any one of twenty-eight branches and reading rooms, and the borrowing and the return are not confined to the same station, a card is necessary as a means of identification of the borrower. It also serves as a record in the hands of the borrower, showing conclusively that the books charged upon it have been returned, if that fact is questioned, and as a receipt in case of the payment of fines. These advantages outweigh the slight inconvenience attaching to the safeguarding of the card by its holder, and the formality of presenting it to the attendants whenever a book is taken out or returned.

CHILDREN'S DEPARTMENT, CENTRAL LIBRARY.

Statistics of circulation inadequate as they are to represent the best work of a library are especially so with reference to the operation of the Children's Department. The use of the department constantly increases, and its efficiency, as a distinct and important part of the activities of the library, is unquestioned. Only the home use of books issued through this department can be indicated by figures, the circulation (included in the total central circulation previously presented), rising from 55,379 volumes in 1907-08 to 57,551 during the year just closed. Besides these volumes issued directly, 17,797 have been sent to borrowers through the Branch Department.

But the rooms are in constant use, both during the day and evening, by youthful readers who are reading for recreation, and by pupils of the schools who are consulting books in connection with their studies. Upon this point Miss Alice M. Jordan, custodian of the department, pertinently remarks:

An increasing number of children find the rooms a desirable place in which to study, not only because of the reference

books but because their homes do not afford sufficient quiet and space for school work. In giving assistance to such children, as we are often called upon to do, we aim to help them to help themselves and in no case to become dependent upon others. So far as time permits, we try to train them to an intelligent use of catalogue and indexes and to some grasp of note taking.

The instruction of pupils from the schools in the use of the library, through brief talks by the custodian, intended to aid in the development of what may be termed "the library habit," and to promote the use of books, has continued during the year, by the regular visitation of classes in charge of their teachers. This opportunity to become familiar with the resources of the library, with the use of the catalogue and the methods of book classification, etc., is freely offered to any school which cares to accept it. The custodian remarks:

A more general readiness on the part of teachers is desired each year in order that there may be some uniformity in library training given to the high school pupils. In this department about 750 children have received such instruction besides that given to more advanced pupils from one of the kindergarten training schools. One of the supervisors advised the giving of similar lessons at two of the reading rooms. Visits to schools have been possible to a limited extent, and the mutual good will thus created has made such visits well worth while. Two talks on children's reading were also given to parents' associations at the school buildings.

In the reference room of the Children's Department books relating to the Old South Historical Courses were reserved upon designated shelves for special use in connection with these lectures; various reading lists have been prepared as requested by teachers and others, and the usefulness of the department promoted in every possible way.

In January Miss Mabel Cummings gave in the lecture hall an illustrated lecture on Japan, especially for children, and in the same month Fräulein Mitzlaff conducted a story hour. These ladies gave their services gratuitously, and the tickets were distributed through the Children's Department to pupils of the schools.

BATES HALL.

In the course of the year readers in Bates Hall have used 515,000 hall use slips, and the number of readers at times taxes the capacity of the hall. The maximum attendance of 399 was attained February 22, 1908. Mr. Oscar A. Bierstadt, in

charge of the Reference Department, reports a large increase in the number of volumes issued through this reading room for home use. On this point he remarks:

The large increase in the number of volumes issued for home use is in part owing to the assistance afforded readers in Bates Hall. Expertness in the consultation of a great catalogue and a wide acquaintance with bibliography from years of library experience discover the desired information for books when the unpracticed reader might find his search fruitless. Volumes called for hall use frequently prove so interesting that the student decides to transfer them to his home use card, and borrowers asking vainly for the newest novel are not seldom attracted to solid study in Bates Hall. Thus the Issue and the Bates Hall Departments help one another.

As indicating the magnitude of the unrecorded use of this principal reading room of the library, to which allusion has been made in connection with the statistics of circulation, the following from the report of Mr. Pierce E. Buckley, in charge of the center desk, is pertinent and suggestive:

On January 7 a record was kept of all hall use slips presented on that day for books to be used in Bates Hall. There were 1,379 slips presented at the center desk and catalogue desk, and 1,574 books were sent on these slips to the hall. Two hundred and ninety-seven of this number were drawn for home use. The reference books were also counted, that is, those left by the readers on the tables, and there were 497, therefore more than 2,071 books were used in Bates Hall on that day.

THE SPECIAL LIBRARIES.

From a report of Mr. Garrick M. Borden, in direct supervision of the special departmental libraries at the central building, are condensed the following details of the work of the year:

THE FINE ARTS DEPARTMENT.

Photographs and Lantern Slides.

The number of photographs that have been added to the collection is 437, besides 241 half-tones or process pictures. The total number now available for use in the department is: photographs, 19,302; process pictures, 8,184; colored photochromes, 1,857. Besides these there are 330 pictures, in portfolios on regular shelf numbers, illustrating American history, portraits, and literary and artistic subjects. The collection of lantern slides, gradually acquired through the

demands of our own lecture courses, has been enlarged by slides relating to Constantinople, Dalmatia, Greece and Sicily. The entire collection now numbers 2,900.

Circulation of Books and Pictures.

The volumes issued for home use from the fine arts collection (included in the total circulation, page 45) number 18,580, an increase of 1,298 as compared with the preceding year.

Pictures in portfolios have been issued for use in the public schools, the number of portfolios aggregating 832. The number issued to private schools and study clubs was 70. The total shows an increase of 179 as compared with the preceding year. The total number of schools requesting and receiving pictures was larger by six than in 1907-08, but although 91 schools received portfolios, about one-half the number circulated were sent to 12 schools.

Visits of Classes.

Reservations of tables and the provision of library material have been made for 54 visits of study clubs, attended by 925 persons. There were also 70 visits by previous appointment of classes from schools or colleges, including 681 persons. In each group an increase in attendance is shown over the number recorded in the preceding year. These figures do not include the constant use of the facilities of the department by individual students, designers, architects, draughtsmen, artists and persons seeking books upon technical and industrial subjects, nor the books reserved from day to day for the pupils of the art schools.

Since October conferences of students taking the Harvard-Lowell Courses have been held in the West Gallery, with a maximum attendance of more than 300 for each month, or at least 1,200 in the aggregate, for the four months October to January inclusive.

BARTON-TICKNOR ROOM.

The following statistics relate to the use of this room for the year:

Barton-Ticknor books issued	12,564
Maps issued	831
Books from other departments, issued for readers applying in this room	9,805

In each case an increased use is recorded as compared with the preceding year. Upon an average 246 books from the

Barton-Ticknor collections, including maps, have been issued daily; and 192 volumes drawn from other departments for use in the Barton-Ticknor room. Upon an average, also, 318 books have been reserved daily for research use in the Barton-Ticknor gallery. The large increase in "reserves" indicates an enlarged appreciation of this quiet reading room for scholarly purposes.

ALLEN A. BROWN MUSIC ROOM.

The additions to this collection comprise 256 volumes, of which 216 were presented by Mr. Brown. These additions are principally orchestral works, chamber music and operas. Among the more important are:

Orchestral scores of Paine's Symphony, No. 1; Noren's Kaleidoskop; MacDowell's Lamia; Sibelius's Symphony, No. 3; Auber's *La fiancée du roi de Garbe*, and *Le premier jour de bonheur*; Thomas's *Gille et Gillotin*; Paine's *Azara*; Vocal scores of Converse's *Pipe of Desire* and *Job*; Wolf-Ferrari's *La vita nuova*; and S. Wagner's *Sternengebot*.

The total number of volumes in the collection is now 11,061. For the use of readers 9,808 volumes were issued during the year.

LECTURES AND EXHIBITIONS.

The free public lectures given in the lecture hall, generally co-ordinated with exhibitions in the fine arts exhibition room, include the following:

Lectures.

1908. February 6. Civic Festival Decorations. By C. Howard Walker.

February 13. Civic Development in South America. By Sylvester Baxter.

February 20. Greek Vases as illustrated by the Collection of the Museum of Fine Arts, Boston. By Arthur Fairbanks.

February 27. Distinctive Types of American Illustration. By Charles H. Caffin. Under the auspices of the Society of Printers.

March 5. Architecture of Japan. By Ralph Adams Cram.

March 12. Design and Color in Printing. By Henry Turner Bailey. Under the auspices of the Society of Printers.

March 19. *Æsthetic Improvement of Water Fronts*. By John Woodbury.

March 24. French Art, including the School of 1830. By Miss Anna Seton-Schmidt.

- March 26. The Garden City Movement and Housing Reform. By Edward T. Hartman. Under the auspices of the Massachusetts Civic League.
- October 9, at 4.30 p. m. On the Study of Art. By Arthur Fairbanks. Introductory lecture to the Museum of Fine Arts Collegiate Courses.
- October 15. A Trip to Brazil. By Miss Caroline H. Kingman.
- October 17. The Artistic and Sanitary Planning of Cities. By M. Augustin Rey, in French and English.
- October 22. Art in Photography, with Special Reference to Natural Color. By Morris Burke Parkinson. Illustrated by slides produced by the autochrome process.
- October 29. Modern City Planning and Its Bearing on the Crooked Streets of Boston. By Arthur A. Shurtleff.
- November 5. Civic Centers and the Grouping of Public Buildings; with a Suggestion for Boston. By Stephen Child.
- November 12. The Hill Towns of Italy. By George B. Dexter.
- November 19. The Building Up of Boston. The commercial side. By Henry C. Long.
- December 3. Constantinople. By Arthur S. Cooley.
- December 4, at 4 p. m. Longfellow's Hiawatha. A reading by Marian Longfellow. Illustrated with slides by John H. Thurston from living Indian subjects.
- December 9. John Milton. By Edwin D. Mead. In commemoration of the three hundredth anniversary of the birth of Milton.
- December 10. A Tour through Greece. By Arthur S. Cooley.
- December 17. Along the Dalmatian Coast. By Arthur S. Cooley.
1909. January 2. Sicily. By Garrick M. Borden.
- January 7. Art Treasures of Ghent and Bruges. By Miss Martha A. S. Shannon.
- January 14. Recent Development in Civic Art. By Sylvester Baxter.
- January 15, at 4 p. m. Japan. By Miss Mabel Cummings. (For children only.)
- January 16. Esperanto: its Advantages and its Progress. By D. O. S. Lowell.
- January 21. Colonial and Revolutionary Churches. By Marian Longfellow.
- January 28. The Architectural Development of the American University. By Ralph Adams Cram.

Exhibitions, Central Library.

1908. February 3. South America.
- February 8-March 2. Wood Engravings by Timothy Cole. Loaned by the Century Company.
- February 17. Greek Vases in the Museum of Fine Arts.
- February 25. Japan.

March 11. Improvement of Water Fronts.
March 15. French School of 1830.
April 6. Modern Dutch Paintings. Photographs given by
B. T. Blommers.
May 1. New Photographs. The United States.
June 1. Pageants. In connection with the Normal School
pageant.
June 15. Portraits of Women. In connection with the con-
vention of the Federation of Women's Clubs.
July 1. Quebec. Tercentenary of Quebec.
August 22. Spanish War. In connection with the conven-
tion of Spanish War veterans.
September 10. American Scenery.
October 5. Civic Improvements in America.
November 9. Italy.
November 23. Constantinople.
December 2. John Milton. Books and portraits.
December 29. Sicily.
1909. January 5. Books, portraits and letters of Edgar
Allan Poe.
January 18. Colonial Architecture.

Besides these exhibitions at the Central Library a regular series of monthly exhibitions has been arranged at the branches and reading rooms from material supplied by the Fine Arts Department.

DEPARTMENT OF DOCUMENTS AND STATISTICS.

Mr. James L. Whitney, chief, reports as follows as to this department, and also as to the manuscript collection, of which he has charge:

The number of volumes placed upon the shelves of this department during the year has been 785; the entire collection now numbers 15,486 volumes, exclusive of the congressional documents of the United States and the parliamentary documents of Great Britain.

The gifts through the American Statistical Association, whose library is in our custody, comprised 676 volumes and 2,017 numbers or parts. These have been received from various governments and societies and institutions.

MANUSCRIPTS.

During the past year about twenty-five hundred of the Chamberlain manuscripts, besides many autograph signatures, have been catalogued. The collection has thus been made more accessible and useful.

Whenever there have been exhibitions at the library, the letters, portraits and engravings in the Manuscript Department have excited great interest.

BRANCHES AND STATIONS.

EXPENSE OF OPERATION.

The entire expense of operation of the branches and reading rooms for the year was \$92,734.96. No new agencies of this kind have been established during the year.

THE SCHOOLS AND THE BRANCHES.

The number of schools supplied has increased, and also the number of individual teachers who have used the facilities of the branches in connection with their class work. The number of volumes sent on deposit to the schools through the Branch Department was 19,638, comparing with 19,555 sent in 1907-08.

Mr. Langdon L. Ward, supervisor, thus reports upon certain phases of the work with the schools:

The influence of the talks given in the Children's Department at the Central Library has been felt at the branches. One custodian says: "A great deal of reference work has been accomplished by the children and for them at the branch. It has been observed that the children do this work more intelligently than formerly and from careful questioning I have come to the conclusion that it is, in great measure, the result of the talks given at the Central Library to the school classes."

Some custodians are very successful in dealing with the schools assigned to them. With the approval of the master they visit the school occasionally to take requests for pictures and books, and to learn in advance what the school work is to be, so that they may be prepared with books. The master and teachers of one school have commended on the improved work of the classes, due to the help of the neighboring reading room.

The following extracts from the annual reports of the custodians of two branches describe very well the work of sending books to schools from a large branch:

"In spite of the additional copies received, the deposit collection here numbers even now less than 1,600 volumes. Except in rare cases only twenty-five volumes are sent to a teacher although fifty would be a better number. Naturally it is still impossible to reach out and extend the deposit use. The present circulation shows a gradual, normal growth since 1900-01."

The requests from schools may be roughly grouped under four heads: I. Definite lists by titles. II. Subject lists with

a few suggestive titles, the rest being left to the judgment of the custodian. III. Subject lists with the choice of books entirely left to the custodian. IV. Lists without definite specification of subject or title, the choice resting entirely with the custodian.

From Mr. Ward's report I also quote the following:

DEPOSIT WORK OF THE BRANCH DEPARTMENT.

The total number of volumes sent on deposit this year through the branches and the two largest reading rooms is 16,629, distributed among 133 places, as against 16,352 volumes, distributed among 124 places, last year. Seventy-three per cent of the books sent this year went to schools.

REFERENCE WORK AT BRANCHES.

The reference work at the branches increases in amount and improves in quality. Some factors promoting this are the following: The increase of the reference collections, the closer relations with the schools, the growing experience of the custodians and assistants, and the persistent emphasis placed upon reference work by those in charge. No function of the branches and reading rooms is more important, and after an adequate collection of reference books has been once secured, there is no immediate expense involved in its extension, though eventually a large growth in the volume of the reference work means more service.

Naturally most of the reference help is given to pupils of the schools. But adults are not neglected, and at many places books are chosen for them by the custodians, either on a given subject, in the case of men often some form of science, or for more general reading. The reports of many of the custodians mention the presence of normal, high school and grammar school pupils, who live in all parts of the city. A few branches are used by students from Boston University, Boston College, Harvard and Radcliffe.

THE CIRCULATION OF PICTURES THROUGH THE BRANCHES.

Pictures from the branch collections have been lent to reading rooms, schools and study clubs to the number of 11,097, as against 9,626 in the year preceding. The collections are still growing. Several branches have a thousand or more pictures, and one, at least, nearly two thousand. Some of the subjects are: Animals, birds, plants, minerals, industries, countries, places, historical events, Indians, authors, artists, statesmen. Recently lists of the collections of ten of the branches were printed for distribution among teachers of the neighboring schools. The lending of these pictures is not only of definite value to the schools but it advertises the branch, and leads to greater co-operation between teachers and library in the use of the books.

The portfolios of pictures from the Central Library have been in greater demand than ever. The number sent through the branches and reading rooms is 793, as against 565 the year before.

The monthly exhibitions of pictures from the Central Library have been of unusual interest.

THE DEPARTMENT OF PATENTS.

The number of volumes in this department is now 10,577, an increase of 407 during the year. The number of persons recorded as using the collection was 6,794 as compared with 5,954 for the previous year, but as the shelves are open these figures are below the true aggregate. These persons consulted 66,454 volumes, an increase of 8,140 over the number consulted in 1907-08.

The English and German files have been perfected by obtaining missing numbers, and they are now complete to the year 1907. Our financial limitations have prevented the acquisition of missing numbers to complete the French series.

THE PERIODICAL ROOM, CENTRAL LIBRARY.

The record of readers present at certain specified hours in each of two successive years, permitting a comparison, is as follows:

HOURS.	10 A.M.	12 M.	2 P.M.	4 P.M.	6 P.M.	8 P.M.	10 P.M.
1908-09.....	8,844	13,239	15,421	22,861	17,585	21,135	4,164
1907-08.....	8,115	12,142	15,300	22,912	18,117	20,623	4,780

From the files, 23,141 bound volumes were consulted during the week in the daytime, and 7,236 volumes in the evening or on Sundays. The corresponding figures for 1907-08 are 24,394 and 7,060. Besides these, during evenings or on Sundays, 15,608 unbound back numbers of periodicals were supplied to readers, and 23,957 in the daytime during the week, as against 13,990 and 22,787, respectively, in the year preceding. There are now currently received and filed at the Central Library, exclusive of government and state publications and library bulletins, 1,462 different periodicals.

THE NEWSPAPER ROOM, CENTRAL LIBRARY.

The maximum attendance in this reading room recorded during the year was 209 on November 1.

The provision of current newspapers filed for daily reading is a department of our work which evidently meets a large

public demand. The seating capacity of the room is frequently exceeded, especially on Sundays. There is also an increasing use of the files of back numbers of newspapers. During the year the duplicates held in reserve have been carefully sifted, gaps in the circulating files filled as far as possible, and surplus copies disposed of on exchange account.

The changes for the year in the newspaper file collection are thus reported by Mr. Pierce E. Buckley, in charge:

Numbers of various issues of the following eighteenth century papers have been added: The Salem Gazette; Connecticut Courant; Boston Post Boy; Continental Journal; Boston Evening Post; Massachusetts Spy; and the Independent Gazetteer.

Nineteen numbers of the Boston Evening Post from 1743-1775 were given to the Essex Institute in exchange for 29 unbound volumes of the Boston Evening Record sent to us in 1906. Only four of these 27 volumes were available for binding, but the remaining volumes are tied in covers and kept in our file.

During the year 327 volumes of papers were added to the files, the total number of bound volumes now being 6,978. The files of papers are practically all collated, and at present a rough catalogue of the volumes is in preparation.

OMISSION OF APPENDICES.

The appendices containing statistical matter, heretofore presented with this report, are this year omitted. Condensed statements covering the subjects usually given in such appendices will be found in the body of the report. The roster of employees is also omitted. A city document published annually in May, in accordance with a city ordinance, contains the names of all city employees.

EXAMINATIONS.

Examinations for the library service were given as follows:

February 29, 1908, Grade E (55 applicants; 36 passed). July 2, Grade E (74 applicants; 51 passed). December 29, Grade E (62 applicants; 44 passed). December 31, Grade C (32 applicants; 21 passed). December 31, Grade B (17 applicants; 7 passed).

ACKNOWLEDGMENTS.

My acknowledgments are due to Mr. Otto Fleischner, assistant librarian, for his constant assistance in the work

of administration; and to the heads of departments and employees generally, for faithful service. Without loyal co-operation on the part of all the usefulness of the library would be much diminished, and the service which the public rightfully expects to receive would fall below the standard of efficiency that such an institution as ours should establish and maintain.

Respectfully submitted,

HORACE G. WADLIN,

Librarian.



ANNUAL REPORT
OF THE
MARKET DEPARTMENT
FOR THE YEAR 1908-1909.

CITY OF BOSTON,
OFFICE OF SUPERINTENDENT OF MARKETS,
February 10, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

DEAR SIR,—In conformity with chapter 3, section 24, of the Revised Ordinances, I herewith submit the report for the Department of Markets for the year ending January 31, 1909.

The portion of Faneuil Hall and New Faneuil Market buildings which are used for market purposes are in good condition, and the repairs made by the Superintendent of Public Buildings and such as have been made by the lessees at their own expense have been of such a permanent nature as to require only ordinary expense during the present year.

The work of the department has been of a routine nature. The rentals have been promptly paid and the regulations for the government of the department cheerfully complied with.

The leases which expired March 31, 1907, were not ordered to be renewed until November 23, 1908, when by action of the City Council the Superintendent of Markets was ordered to renew the leases at not less than 12½ per cent increase over

what had been received during the previous lease; also to include in such leases the space occupied in Quincy Hall.

The total annual income from rents in Faneuil Hall and New Faneuil Hall Market from January 1, 1902, to January 1, 1908 was	\$110,552 00
On January 1, 1908, under authority given the Board of Street Commissioners to grant permission for the use of space on the sidewalks, the two stands at the west end of New Faneuil Hall Market, which paid a rental of six hundred (600) dollars per year, were transferred to and collected by that department	600 00
Leaving the amount collected annually by the market from January 1, 1908, to December 31, 1908	\$109,952 00
The annual income from tenants in Quincy Hall was	5,650 00
Total income from markets and Quincy Hall	<u>\$115,602 00</u>
Under the leases issued for ten years from January 1, 1909, to January 1, 1919, the annual income will be	<u>\$131,378 00</u>

While the annual income received from the Market Department during the year 1908 was six hundred (600) dollars less than what was annually credited to the department previous to January 1, 1908, the amount received by the city for space formerly under the control of the Market Department has been the same, the above \$600 being paid to the Board of Street Commissioners, who were given the charge of permitting persons to occupy stands in the public streets and making a charge for the same, as the Corporation Counsel has ruled that these stands come within their jurisdiction. The Board of Street Commissioners also charge the lessees of the basements under Faneuil Hall for the use of sidewalk privileges, which said lessees consider unfair, as the rent of the premises occupied by them was based on the same sidewalk privileges when their rents were established under the previous lease. They consider it is double taxation, as it is paying two departments of the city rental for the same space.

Provisions which have been offered for sale in the markets have been of excellent quality, and the department has been required to condemn much less than in previous years.

During the year 1908 there have been condemned and destroyed as unfit to be used for food:

One hundred twenty-two (122) pounds poultry.

One (1) barrel oysters.

One hundred eleven (111) ducks and other game.

Two (2) cans lard.

Fourteen (14) barrels cabbage.

One hundred forty-two (142) quarts berries, besides large quantities of fruit and vegetables sent to the dumping scow.

The police connected with the department have made seventy-one (71) arrests for the following offences: Larceny, thirty (30), drunkenness, twenty-five (25), assault and battery, fourteen (14), breaking and entering, one (1), vagrant, one (1); total, seventy-one (71); and have reported eighteen (18) cases of cruelty to animals to the Dumb Animal Society.

LADIES' TOILET.

When the work of restoring Faneuil Hall was completed, arrangements had been made for a ladies' toilet on the second floor of Faneuil Hall, but by reason of the hall being closed on Saturday afternoon and evenings, when the market houses were open, frequent complaints were made of a lack of proper accommodation for market employees.

Arrangements have recently been made and the lessees notified of suitable accommodation which have been provided for ladies in their employ during the hours when the market house is open, which, it is hoped, will remove all cause for complaint.

The appropriation for the department for the year 1908 was \$11,000 00 which has been expended as follows:

Salary of Superintendent of Markets	\$3,000 00	
Salary of deputy superintendent of markets	1,500 00	
Salary of weigher, city scales	933 32	
Salary of watchmen	2,049 00	
Salary of messenger	833 33	
Salary of janitors	1,108 20	
Electric lighting	376 76	
Gas	160 54	
Telephone	127 80	
Furniture cleaning, etc.	229 23	
Repairs	387 71	
Printing	74 98	
Stationery	56 70	
Police service	42 00	
Fuel	25 50	
		10,905 07
Balance of appropriation unexpended		<u>\$94 93</u>

The property in the department belonging to the city is as follows:

Electric light wiring in Faneuil Hall and New Faneuil Hall	
Market cost	\$1,672 00
One Morse safe	150 00
One Howard watch clock	200 00
One Howard watch clock	50 00
Two roll top desks and one roll case	125 00
Two clothes presses	30 00
Scales, weights, etc.	125 00
Bookcase, office furniture, stationery, etc.	100 00
	\$2,452 00

Respectfully submitted,

GEORGE E. MCKAY,
Superintendent of Markets.



ANNUAL REPORT
OF THE
MUSIC DEPARTMENT
FOR THE YEAR 1908-1909.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

DEAR SIR,— The Board of Music Trustees respectfully submits its annual report, covering the period from February 1, 1908, to January 31, 1909, inclusive.

During that period the membership of the Board has undergone one change, William C. Brooks having been appointed trustee, in place of Philip Greely. On June 8 the Board reorganized for the year, John A. O'Shea being elected chairman and William A. Leahy secretary. The names and terms of the present trustees follow:

John A. O'Shea, <i>Chairman</i>	Term to expire April 30,	1912
Alfred P. DeVoto.....	" " "	1909
Edwin A. Franklin.....	" " "	1910
Daniel P. Shedd.....	" " "	1911
William C. Brooks.....	" " "	1913

FINANCIAL STATEMENT.

The appropriation for the department this year was \$15,000. The expenditures were \$14,999.82. Office expenses consumed \$1,970.58 of the total sum and the remainder was devoted to concerts. The number of concerts given and

paid for was 104. The average cost per concert, including office expenses, was \$144.23. The following table exhibits the course of this item in recent years:

YEAR.	Expenditure.	Concerts.	Cost per Concert.
1903.....	\$15,015 56	60	\$250 26
1904.....	15,099 25	71	214 29
1905.....	16,499 36	78	211 53
1906.....	20,000 00	118	169 49
1907.....	*25,000 00	146	146 75
1908.....	14,999 82	104	144 23

* A construction account of \$3,574.12 has been deducted in calculating the cost per concert in this year.

The cause of the decrease in the average cost per concert this year has been a slight reduction in the size of the band and in the conductor's pay. On the other hand, the employment of a lecturer at the winter concerts and the payments made for summer concerts not given on account of rain have partially offset these savings.

The decrease in the average cost of the summer concerts during the last six years, amounting to more than 53 per cent., or \$144.59 per concert, is shown in the following table:

YEAR.	Average Size of Band.	Total Cost.	Number of Concerts.	Average Cost.
1903.....	40	\$10,247 05	38	\$269 66
1904.....	38	9,364 40	36	260 12
1905.....	39	10,561 47	42	251 46
1906.....	32	13,647 36	80	170 59
1907.....	26	14,571 64	107	136 18
1908.....	24	8,504 45	68	125 07

To effect this decrease, the department has reduced the size of the band at the minor concerts, the conductor's, musicians' and attendants' pay, the charge for music and the cost of teaming. Meanwhile the average cost of the winter concerts has increased about 25 per cent., or \$25.38 per concert, the increase being due to the employment of one additional musician and the lecturer.

YEAR.	Total Cost.	Number of Concerts.	Average Cost.
1904.....	\$3,415 10	34	\$100 44
1905.....	3,785 94	36	105 16
1906.....	4,103 04	38	107 97
1907.....	4,599 42	39	117 93
1908.....	4,529 79	36	125 82

The office expenses have decreased this year, owing to the reduction of the secretary's salary. The amounts expended for this purpose during the last seven years are exhibited in the following table:

1902.....	\$2,169 77
1903.....	2,241 49
1904.....	2,159 63
1905.....	2,122 45
1906.....	2,218 60
1907.....	2,254 82
1908.....	1,970 58

An itemized table of the expenditures for 1908 follows:

Expenditures, 1908-09.

Office expenses.....		\$1,970 58
Secretary.....	\$1,299 99	
Clerk.....	440 00	
Telephones.....	79 33	
Stamps and stationery.....	104 12	
Messenger service.....	13 35	
Small items.....	33 79	
Summer concerts (68 concerts).....		8,499 45
Conductors.....	\$661 68	
Band.....	6,909 92	
Teaming.....	565 00	
Attendants.....	200 00	
Chairs.....	50 40	
Printing.....	33 98	
Rehearsal hall.....	30 00	
Music.....	11 18	
Repairs on portable stand.....	22 10	
Awning.....	10 00	
Lanterns.....	5 19	
Winter concerts (36 concerts).....		4,529 79
Orchestra.....	\$2,765 00	
Lecturer.....	512 50	
Singers.....	360 00	
Attendants.....	282 00	
Rent and janitor service.....	260 00	
Printing.....	350 29	
		\$14,999 82

For the summer concerts a band of forty skilled musicians was organized and divided into two sections of twenty players each. This band at its full strength gave ten concerts on the Common. Fifty-five concerts were given by the sections separately, and three concerts for children by a sub-section of twelve players in the yards or halls of the vacation schools. Albert M. Kanrich conducted sixty-two of the concerts, Jacques Benavente three, and Harold E. Brenton three. A list of locations follows:

Common.....	Sunday afternoons.....	10
Marine park.....	Sunday evenings.....	10
Franklin park.....	Saturday afternoons.....	8
Jamaica pond.....	Wednesday evenings.....	7
Charlestown.....	Hayes square.....	1
	Winthrop square.....	2
	Sullivan square playground.....	1
East Boston.....	Wood Island park.....	1
	Ashley avenue and Breed street.....	1
	Border street, Central square.....	1
	Border and Sumner streets.....	1
	Sumner and Jeffries streets.....	1
North End.....	North square.....	1
West End.....	Charlesbank gymnasium.....	1
Dorchester.....	Edward Everett square.....	1
	Norfolk and Morton streets.....	1
	Meeting House Hill.....	1
	Savin Hill avenue.....	1
	Talbot and Welles avenues.....	1
	Adams street and Granite avenue.....	1
Roxbury.....	Albany and Dearborn streets.....	2
	Washington park.....	1
	Parker Hill avenue.....	1
	St. Alphonsus and Calumet streets.....	1
West Roxbury.....	Hyde Park avenue and Mt. Hope street.....	1
	Roslindale playground.....	1
Brighton.....	Brighton square.....	1
	North Brighton playground.....	1
South End.....	Warren avenue and Clarendon street.....	1
	Massachusetts avenue near Shawmut avenue...	1
	Emerald and Compton streets.....	1
Long Island.....		1
Hancock school.....	North End.....	1
Bigelow school.....	South Boston.....	1
Emerson school.....	East Boston.....	1

The average attendance at the various concerts was roughly estimated as follows:

	Concerts.	Average Attendance.
Common.....	10	7,800
Marine park.....	10	13,500
Jamaica pond.....	7	8,800
Franklin park.....	8	2,400
Streets and squares.....	18	3,500
Small parks.....	3	5,000
Playgrounds.....	5	2,600
Fields.....	3	3,700
School yards.....	3	900
Long Island.....	1	1,100

Besides conducting these concerts, the department assisted in arranging the public music for Independence Day.

ORDER.

The order at Jamaica pond and, perhaps, at Marine park, appears to have deteriorated. In the former location the police are handicapped by insufficient lighting, and the concerts, which are widely advertised, have become a rendezvous for mischief-makers and disturbers. In South Boston there have been instances of disorder on the cars, due to rowdyism among passengers returning from the concerts. We believe that concerts in these two locations, and, perhaps, in others, should be given on Sunday afternoons. At the afternoon concerts now given on the Common and in Franklin park the order is unexceptionable.

WINTER CONCERTS.

The winter concerts of 1907-08 and 1908-09 have been the most successful ever given by the Music Department. The attendance has increased, averaging now over 750; the programs are followed with close attention and the general attitude of the audiences is all that could be desired. In this work the department seems to have plunged a really vital root of interest into the public consciousness.

A review of the causes which have led to the gradual establishment of the chamber concerts on so firm a basis may be valuable as an index to the direction which further progress must take. These causes, briefly summarized, are (1) a conspicuous improvement in order and attention, due to the

issue of minors' tickets, strictly limited in number, and to personal vigilance at the entrance and within the hall; (2) the presence of a lecturer to explain the music; (3) the choice of larger and more suitable halls, visited with some regularity; (4) the addition of an extra first violin and of instrumental solos; (5) the printing of notes, texts and other information on the programs, and (6) the natural momentum or cumulative gain resulting from the efforts of many seasons.

The success of the lecture feature has been especially pronounced. In an informal and discursive way Professor Elson has explained the structure and expressive qualities of the different instruments, analyzed the forms of classic compositions, described the lives of great composers and characterized their styles, and differentiated the scales, dances, and folk-songs of various nations. His discourses have lifted these concerts to the plane of authoritative musical education.

For the season of 1908-09 William F. Dodge has been selected as leader of the orchestra. A list of the halls in which concerts were given and paid for during the fiscal year follows:

Dorchester High School.....	6
Roxbury High School.....	6
Girls' Latin School.....	4
Chapman School, East Boston.....	4
Girls' High School.....	3
South Boston High School.....	3
Charlestown High School.....	2
Faneuil Hall.....	1
Curtis Hall, Jamaica Plain.....	1
Brighton High School.....	1
Bowdoin School, West End.....	1
Roger Wolcott School, Dorchester.....	1
Lowell School, Jamaica Plain.....	1
Franklin Union Hall.....	1
Knights of Honor Hall, Roslindale.....	1

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MUNICIPAL MUSIC.

In view of recent discussions as to the cost of municipal music, it may not be irrelevant to note that in many other cities, both American and foreign, greater sums are expended for this purpose than in Boston. In Germany, says a recent writer, "everywhere the municipal orchestra is in evidence, and everywhere it is regarded as of as much importance in the lives of the people as tram-cars or pavings. . . . Even in little Mayence [a city of only 90,000 inhabitants] the municipality pays the deficiencies of popular concerts, not seldom handing over to the cause of art the very respectable sum of \$5,000 a year." In Philadelphia about \$35,000 is appropriated annually for the summer band concerts alone, the

cost per concert being nearly twice as great as in Boston; and in New York, park and pier concerts, as well as lecture concerts of an educational character, have reached a high stage of development. Band stands are provided everywhere, police supervision is strict, the pay of the bandmen is high, and in Central park a musician of national reputation is engaged as conductor. The status of popular music in San Francisco may be inferred from the cost (\$80,000), of the great band stand, in the form of an arch of triumph, flanked by stone colonnades, erected in Golden Gate park by the generosity of a private citizen.

NEEDS OF DEPARTMENT.

The immediate needs of the Music Department are (1) a shell stand, with a covered auditorium and seats, on Boston Common; and (2) small stands in the parks in the various sections of the city. These improvements have been recommended in our annual reports for several years, and should be provided as soon as circumstances will permit, if Boston is not to lag behind other cities in the appointments furnished for its open-air concerts. The smaller stands, as we have noted, will pay for themselves in a few years by the saving in transportation charges. The music court on the Common might properly be provided out of the income of the Parkman Fund.

Respectfully submitted,

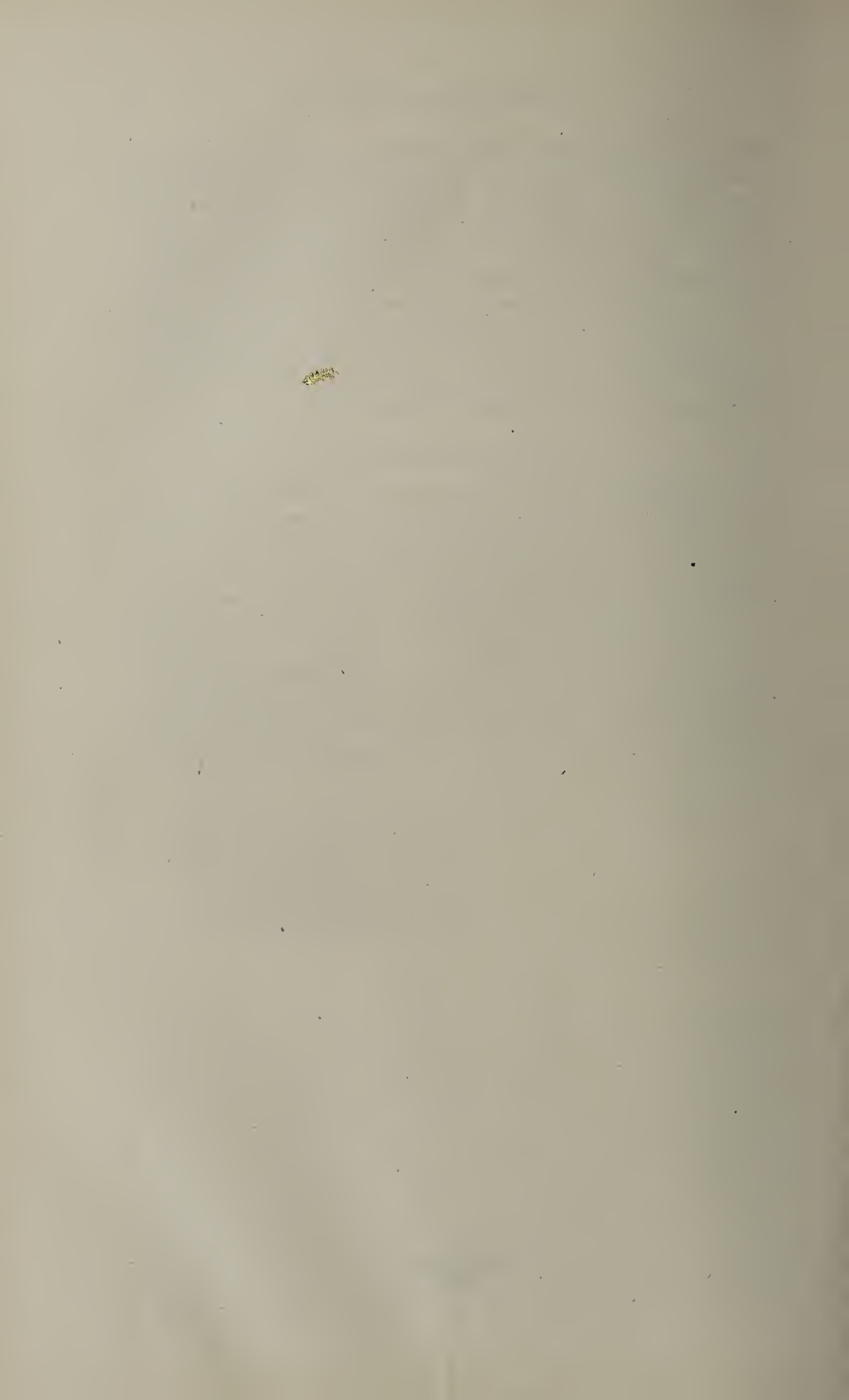
JOHN A. O'SHEA, *Chairman.*

ALFRED P. DEVOTO.

EDWIN A. FRANKLIN.

DANIEL P. SHEDD.

WILLIAM C. BROOKS.





ANNUAL REPORT
OF THE
OVERSEERS OF THE POOR DEPARTMENT
FOR THE YEAR 1908-09.

Boston, March 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— The Board of Overseers of the Poor herewith presents its forty-fifth annual report of the present series, covering the year from February 1, 1908, to January 31, 1909.

EXPENSES OF THE DEPARTMENT.

Our drafts upon the city treasury during the year ending January 31, 1909, amount to	\$143,889 40
Sundry receipts paid over to City Collector	20,640 26
Leaving the net charge to the city for the department for the year	<u>\$123,249 14</u>
This is \$5,195.45 more than the previous year.	
Amount collected by us for care in City Hospital of state paupers, and those belonging elsewhere than in Boston, ...	<u>\$53,370 89</u>
Amount paid over to the Trustees of the City Hospital in the year	<u>\$53,370 89</u>

STATISTICS OF CASES AIDED.

The number of families assisted by us in the year was 2,430, an increase of 318 families from the previous year. Of these, 284 families resided in other cities and towns, but had retained their settlement in this city, and we received payment for aid rendered to 201 families residing in Boston whose legal settlement was elsewhere.

The number of new cases aided during the year was 704. The total number of cases dealt with since 1864 is 39,941.

The number of official visits made by our visitors during the year was 22,772, of which 15,094 were made in the homes of the poor and 7,578 for information.

FAMILIES AIDED DURING THE YEAR ENDING JANUARY 31, 1909.

- 1,404 having settlements here, aided directly from this office.
- 284 having settlements here, aided in other cities and towns, through the overseers of the poor of those places.
- 257 families, of which the man is unsettled, the wife and children having a settlement here.
- 201 residing here, having settlements in other cities and towns, which refund amount of relief granted.
- 259 unsettled cases aided on account of the state.
- 25 non-settlement cases, temporarily aided.

2,430 families, representing about 7,290 persons.

NUMBER OF FAMILIES AIDED IN EACH MONTH OF THE PAST TWO YEARS.

1907.	Feb.,	1,137	families.	1908.	Feb.,	1,304	families.
	March,	1,112	"		March,	1,299	"
	April,	923	"		April,	1,117	"
	May,	909	"		May,	1,095	"
	June,	908	"		June,	1,056	"
	July,	903	"		July,	1,062	"
	Aug.,	891	"		Aug.,	1,034	"
	Sept.,	885	"		Sept.,	1,041	"
	Oct.,	917	"		Oct.,	1,057	"
	Nov.,	970	"		Nov.,	1,085	"
	Dec.,	1,109	"		Dec.,	1,208	"
1908.	Jan.,	1,250	"	1909.	Jan.,	1,258	"

The sum of \$86,854.57 has been given directly to the poor, to which should be added the sum of \$3,567.75 paid for burials, the sum of \$6,301.57 paid for support of the Temporary Home, and the further sum of \$11,047.25 paid for support of the Lodge for Wayfarers, making a total of \$107,771.14 actually

paid out by the Overseers of the Poor from the tax levy for the direct relief of the poor. We have also disbursed as trustees the further sum of \$27,001.56 to the various pensioners and beneficiaries adjudged worthy and falling within the provisions of the trusts.

CERTAIN EXPENSES OF THE DEPARTMENT DURING THE
PAST YEAR.

Net cost of the department.	\$123,249 14
Aid given directly to the poor	\$86,854 57
Less amount paid to other cities and towns	12,326 05
Leaving amount actually given to poor in Boston	<u>\$74,528 52</u>
Number of families aided	2,430
Population of Boston, probably	625,000

It will be seen by the statistics that the net cost of our department increased about \$5,200 over last year. The amount of material aid given directly to the poor increased \$7,278. An actual saving was made in the amount paid out for salaries. An honest effort is made by the members of the Board to keep down the expenses of our work, but necessity knows no law. We are sworn to faithfully perform our duties as Overseers of the Poor, and the paramount duty is to care for the poor. That duty we must perform as it is laid out for us by the laws of this Commonwealth and by the exigencies of the times.

An earnest attempt is made to ascertain at the beginning of each fiscal year what the probable expense of our department will be for the next ensuing twelve months. Estimates are sent in to the Mayor and City Council based upon our past experience and best knowledge. These estimates are not padded in the slightest degree, but are carefully made up from actual expenses in past years. Under these circumstances a cut of thousands of dollars from the estimates in the amount allowed for our department means inevitably a large deficit at the year's end. Moreover, a sudden panic and subsequent lack of work because of business troubles, such as happened a year ago, is sure to augment our expenditures even beyond the original estimates.

The amount asked for by our board last year was	\$141,150 00
The amount allowed was	135,000 00
The amount actually expended was	148,839 74
This year we asked for	147,013 00

which is about \$1,800 less than the sum actually expended in the year just closed.

Already the first two months of this year show an increase of expenditures over last year of \$875.21, showing that in all human probability our expenses this coming year will exceed those of 1908, and that in our efforts to be economical we may have underestimated the actual amount to be expended.

THE LODGE FOR WAYFARERS.

There has been an increase of lodgings given this year of 2,460 over last year. The increase in individual lodgers was 1,730. The average number of lodgings per man was 2.58 this year as against 2.80 last year. The increase in lodgings was very marked in the early part of the year, and continued to be noticeable until November, when there was a marked falling off, and this was true in December and January. Apparently, the turn for the better has come, and the coming year is to be one of better times and improved conditions.

Medical Inspection of Lodgers.

Last year's report contained an account of the way in which a bequest of Charles E. French to the Lodge was being used to pay for the expenses of regular medical inspection. The bequest having been exhausted, the question of continuance of the work at the expense of the City of Boston was considered by the Board. It was finally voted that the work was too valuable to be stopped, and that it should be adopted by the Board as a part of the regular running expenses of the Lodge. The value of the work is becoming more apparent daily. A great deal is being done to benefit the men whom we shelter, also a great deal of preventive work for the benefit of the general health of the community. Many of the men are afflicted with loathsome and highly contagious diseases, and prompt and efficient treatment is given them, and they are sent to the appropriate hospitals where they can be treated and cured, and the danger of contagion is practically done away with for the time being at least.

Number of Lodgers by Months.

	Individual Lodgers.	Total Lodgers.
1808.		
February.....	1,143	3,844
March.....	1,081	3,575
April.....	1,261	3,197
May.....	1,047	2,656
June.....	635	1,315
July.....	507	940
August.....	710	1,324
September.....	665	1,232
October.....	936	2,136
November.....	945	2,307
December.....	1,011	2,669
1909.		
January.....	906	2,850
Totals.....	10,847	28,045

Average number of lodgings per man 1908-09 2.58
Average number of lodgings per man 1907-08 2.80

Place of Birth.

	Number.	Per Cent.
United States:.....	5,842	53.86
Ireland.....	2,220	20.46
England.....	677	6.24
British Provinces.....	822	7.58
Scotland.....	309	2.85
Other countries.....	977	9.01
Total.....	10,847	

Total number of meals from February 1, 1908, to January 31, 1909, 47,721
Total number of meals from February 1, 1907, to January 31, 1908, 49,001

There has been an increase of the total number of lodgers the past year as compared with the year previous of 2,460.

This is due to the very large increase the first four months of this year, the increase being 4,444.

The last three months of this year, November and December, 1908, and January, 1909, show a decrease of 2,084.

We gratefully acknowledge the following contributions to the Lodge: Marston's restaurant, cooked food; Cobb, Bates & Yerxa Company, pies and doughnuts; New England Kitchen, cake.

	<i>The Work Test.</i>			
	1905.	1906.	1907.	1908.
Number of men who worked for aid given	163	103	127	281
Number of day's work actually performed	1,167	680	718	2,677
Number of men receiving work cards who did not present them for work,	22	28	40	48

TEMPORARY HOME FOR WOMEN AND CHILDREN.

The Home is in excellent repair and is under the charge of the same matrons who were there last year.

There have been only slight changes in the rules of the house.

A new oven for baking bread was installed in August, and eighteen new mattresses were bought in June.

As in the past, the committee in charge has tried to make the Home a place where relief may be found by respectable women temporarily in need of food and shelter. To them are given clean beds, simple and well-cooked food, and the care necessary to restore them to their friends or to provide them with work or with some more permanent home. All the work of the Home is performed by the inmates.

Out of 967 individual women admitted, 432 were new cases, many of them in need only temporarily, and by accident. It frequently happens that a woman, a stranger in the city, with little or no money, sometimes with a family of children, fails to meet her husband at the railway station, and she is brought to the Home for the night, and there the husband afterwards finds her, safe and comfortable.

The cases of illness are often difficult to meet, and they are sent as quickly as possible to the proper hospital.

The proportion of slightly demented women who have wandered away from home is quite large, and it is sometimes very hard to find their friends.

The number of places found for those who want work is a little larger than it was last year, but it has been a hard year for those out of work. The hard year may also account in some degree for the greatly increased number of inmates. The average length of stay has increased somewhat.

The inmates on Sunday may accompany one of the matrons either to a Protestant or to a Roman Catholic church, and many avail themselves of the privilege.

The children require especial care, and one of the matrons has charge of the Nursery Department. The foundlings, the lost and the runaway children are generally brought in at night, and often in bad condition from exposure, and they receive the attention of a competent nurse, who has the responsibility of caring for them herself or of sending for a physician when they require medical attendance.

Two hundred and eighty-six children out of a total of 636 came with their mothers. That included, of course, many infants coming directly from the Lying-in Hospital, with inexperienced young mothers not yet fully recovered from childbirth. The time they are allowed to stay with us is usually only seven days and that is too short for much training, but the matron does what she can to teach them how to take proper care of themselves and their babies. Children are also often brought by societies for a part of a day only, and of them no record is kept.

The foundlings are given as quickly as possible into the care of the state. The runaways and lost children are kept until the parents or guardians can be found. This often requires much time and attention.

Children brought by the state are often past the age of infancy, and are waiting for some change of residence or guardianship. There is a room for their especial use and for their board the state pays the city a fixed charge.

The bread baked for the Wayfarer's Lodge, besides what was consumed in the Home, was 10,750 loaves, an increase of 225 loaves. This bread is mixed by the women and baked in a large oven in the Home.

The donations were very few, and we miss greatly the clothing from the Boston Sewing Circle, now dissolved, which had been kindly given to us for many years.

The committee gratefully acknowledge gifts from Mrs. Barrett, of Antrim, N. H., of a box of paper toys and \$1, and from other friends a box of paper toys and a large supply of coffee.

Under an arrangement existing for many years the Home sends all women applying for admission when about to give

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CITY DOCUMENT No. 26.

birth to a child to the Boston Lying-in-Hospital, on McLean street, and pays a stipulated sum for their board and attendance there. The amount so paid by the Home for such cases during the past year was \$1,140 00

Of this amount there was charged to the state for unsettled cases	\$564 00	
To other cities and towns for cases settled in such cities and towns	190 00	
Received from individuals	200 00	
		<u>\$954 00</u>
Leaving the net cost to the city for the care of confinement cases		<u>\$186 00</u>

Statistics of the Temporary Home.

	1908-1909				1907-1908			
	INDIVIDUAL LODGERS.		TOTAL LODGERS.		INDIVIDUAL LODGERS.		TOTAL LODGERS.	
	Women.	Children.	Women.	Children.	Women.	Children.	Women.	Children.
February.....	112	52	460	143	90	37	325	91
March.....	120	42	503	173	98	52	344	133
April.....	126	67	442	221	85	52	308	156
May.....	140	73	560	279	89	54	263	161
June.....	143	68	433	134	90	71	332	208
July.....	119	80	433	275	75	59	258	151
August.....	142	72	543	224	90	59	340	181
September.....	105	41	442	158	92	42	349	144
October.....	119	64	421	220	103	56	397	197
November.....	107	50	520	217	113	46	408	166
December.....	124	56	532	205	136	49	565	160
January.....	113	43	524	218	126	51	583	163
Total.....	1,470	708	5,813	2,467	1,187	628	4,472	1,911
Average length of stay, 3 ⁷⁷ / ₁₀₆ days.					Average length of stay, 3 ⁵¹ / ₁₀₆ days.			

Total number of individual women admitted.....	967
Number of individuals admitted once only.....	645
Number of individuals admitted more than once.....	322
	<u>967</u>
Number of old cases of individual women admitted.....	535
Number of new cases of individual women admitted.....	432
	<u>967</u>
Number of individuals known to have been in almshouse only	182
Number of individuals known to have been in prison only .	73
Number of individuals known to have been in almshouse and prison	94
Number of individuals not known to have been either in alms-house or prison	618
	<u>967</u>
Number of women admitted between 7:45 p. m. and 6.45 a. m. .	483
Number of children admitted between 7.45 p. m. and 6.45 a. m. .	188
Total number of places secured at domestic service	300
Number of places secured for mothers with children	44

Total number of meals served	27,458
Number of meals served to persons not living in Home	5,696

Record of Children Admitted to the Home.

Number of individual children admitted	636
Number of children admitted once only	564
Number of children admitted more than once	72
	— 636
Number of children who came with mothers	286
Number of children who were brought by societies	40
Number of children who were brought by state	76
Number of children who were brought by city	84
Number of foundlings	11
Number of runaways	28
Number of lost children	34
Number of children who came in other ways	77
	— 636

CITY HOSPITAL.

The direct expense to this department of our work at the hospital during the past year was \$3,948.86. We collected in all during the year from this source for the City of Boston the sum of \$53,396.84. The sum of \$43,498.53 was also received at the City Collector's office on account of contagious cases cared for at the City Hospital, on bills furnished by our department. If we add to these amounts \$20,640.26, collected at our main office, for the relief by us of paupers settled otherwise than in Boston, and paid over directly to the City Collector, we have an aggregate of \$117,535.63 collected by a department whose gross expense was only \$143,889.40.

REPORT OF HOSPITAL WORK, FISCAL YEAR ENDING
JANUARY 31, 1909.*Main Hospital.*

Number of admissions	8,747
Number of histories taken, Main and South Departments	8,792
Number of state notified cases	3,319
Number of town cases	1,089
Number of letters written, further information	4,285

South Department.

Number of state notified cases	854
Number of town notified cases	545
Number of visits made, Main and South Departments	863

Amount of money received at Main Department from Overseers of the Poor	\$53,370 89
Amount of money received at City Collector's Office on account of South Department cases (contagious diseases)	<u>\$43,498 53</u>

PRESERVATION OF RECORDS.

Admonished by the destruction of the courthouse in Portland, Me., and the loss by fire of many of the priceless records of city and county, the Board voted early in the year to consider the question of better protection of our records from fire. A committee was appointed, which reported in favor of the construction of a vault in the basement of the Charity Building and the installing therein of steel cases to hold our records; this vault to be in a location easy of access to the visitors and other employees of the Board. The report was accepted and a commodious fireproof vault has been built under the front entrance to the building. It is reached by a stairway from the visitors' room through heavy steel doors. It is lighted by electricity, heated by steam and equipped with especially constructed steel cases adapted to receive many thousands of our registration cards in addition to the 40,000 which we now have on hand filled out. The total expense of the vault and cases was \$1,218.77, a sum which we think well expended in view of the extremely dangerous condition in which our records were at the beginning of the year.

EAST BOSTON OFFICE.

A new office has been established in East Boston in the Municipal Building, at the corner of Maverick and Bremen streets. The visitor for the district is to be found here every day, from ten to half-past ten o'clock in the forenoon.

JAMAICA PLAIN OFFICE.

Owing to the fire which destroyed Curtis Hall in December, 1908, it became necessary to find a new office in this district. An office was obtained in the Thomas Street Schoolhouse, by the courtesy of the Grand Army and the Building Department, and our visitor located himself there in January of this year. His hour is from 11.30 a.m. to 12.15 p.m.

RESIGNATION OF DR. DERBY.

In April, 1908, Dr. William P. Derby sent in his resignation as a member of the Board, owing to his removal to Cambridge. Although Dr. Derby's term of service was brief, he had shown evidence of great interest in the work, and the Board felt that it was a great loss to the city to have him leave us. We hope that his future may be a pleasant and prosperous one.

RESIGNATION OF MISS NEWMARCH.

Miss Josephine Newmarch, one of the clerks in the office, and the oldest employee in the point of service in the department, resigned in June on account of failing health, her resignation to take effect in July. She began with us in July, 1864, and continued steadily at work for us during all the intervening time, a period of forty-four years. During all this time she had been faithful and efficient. A most useful and able clerk, she had a large fund of important information gained through her long experience, and was a most valuable aid to our secretary and visitors. Miss Newmarch lived but a few months after her retirement from her duties, dying in November, 1908, at the age of sixty-six years.

THE CHELSEA FIRE.

At the time of the Chelsea fire, this department co-operated quite extensively with the relief committee, sending over several of our visitors and clerks for many days, in addition to work rendered by the members of the Board and employees on the night of the fire. Later, at the request of the relief committee, we gave one of our visitors leave of absence for one year, in order that the relief committee might have the advantage of his trained assistance in closing up its work in Chelsea. Both Charlestown and East Boston have increased in population because of the fire, and many of the newcomers from Chelsea are applicants for pauper aid, thus increasing our work materially.

THE UNEMPLOYED.

Owing to the business depression, the number of able-bodied men with families whom we found it necessary to help increased enormously. In ordinary times, this class of dependents upon our aid is reduced to so small a number as to be almost a negligible quantity. Widows with children, deserted wives, and men and women too old or too sick to labor, are practically all who are carried on our rolls in good times. When we are obliged to aid men who can work, we require them to render a partial equivalent for the aid given by working in the woodyard. The work so given, while not obliterating in any way the taint of pauperism, serves as an admirable test of the worthiness of the applicant for aid. Many times it happens that the men are too lazy to work for groceries or coal to supply the pressing needs of the family, or possibly they make extra efforts to find a kind of work more attractive than the woodpile. At all events,

in the past year cards to work in the woodyard for aid were given to forty-eight men who did not present themselves at the yard to do the work.

THE JEFFRIES FUND.

By the will of David Jeffries, dated January, 1786, a fund was established in the hands of the Overseers of the Poor, the income of which was to be "applied to the purchase of tea, coffee, chocolate, and sugar for the refreshment of those persons who, in the providence of God, are, or shall be, reduced and obliged to take shelter in the almshouse, after having lived reputably; the Overseers of the Poor to be judges as to the persons, but always giving the preference to the pious poor." This fund has been lying dormant in the hands of the Overseers of the Poor since its foundation in 1786, the interest having been annually added to the principal until the fund amounted in 1908 to nearly \$10,000. It seemed to your Board a pity that some use should not be made of this fund, and it was voted to engage counsel to petition the Supreme Judicial Court to authorize such a use of the income as would be, in our opinion, most beneficial. Proceedings were accordingly instituted, with the result that a decree was obtained by the terms of which it was provided that "where expedient and advisable, in the judgment of the Overseers of the Poor in the City of Boston, it shall furnish refreshment and aid from the income of said fund in the form of tea, coffee, chocolate and sugar, but that relief and refreshment may be given in forms other than that, and may be given in the form of small gifts of money, not exceeding fifty dollars to a single person in any one year, and may be given to those who are or shall be reduced and obliged to apply to the City of Boston for relief, even if not sheltered in the almshouse."

TRUST FUNDS.

These funds are divided into seventeen distinct trusts and cover a wide range. From time to time the Board have established certain rules and precedents to govern them in the administration of these trusts, but in the main a perusal of the extracts from the wills establishing the trusts will disclose the limitations of applicants. All applicants for trust pensions must prove a legal residence in Boston, as we are obliged by law to confine our benefactions to settled cases.

The total amount of the trust funds in our charge as a corporation has increased \$5,001.85 during the year, and is now \$825,854.80.

The number of beneficiaries now aided from the Pemberton, the Boylston Relief, the David Sears Charity, the Moses Hunt, the Thayer and the Rachel G. Stevens Funds is 242, a decrease of 3 from the number aided on February 1, 1908. During the year 25 have died, 2 have gone to insane asylums, 3 to Home for Aged Women, 3 to almshouse, 2 have gained settlement elsewhere and are dropped, 1 has withdrawn, 3 have left the state, and in 6 cases we have stopped the pensions which we had been giving; 42 new names have been added.

We have paid during the year from the Boylston Education Fund \$5,667.69; 30 children are now supported on this fund.

For the details of the various funds held by us, showing receipts and expenditures since February 1, 1907, see statement submitted herewith. Extracts from the wills establishing these trusts will be found at the end of this report.

FINANCIAL STATISTICS.

The reports of the Secretary and Treasurer, submitted herewith, show receipts and expenditures during the last twelve months in detail. The books and accounts have been audited by an expert accountant, whose certificate is hereto annexed. A schedule of the personal property in our hands February 1, 1909, is also annexed.

Respectfully submitted,

In behalf of the Overseers of the Poor,

WILLIAM P. FOWLER,
Chairman.

BOSTON, MASS., April 1, 1909.

WILLIAM P. FOWLER, ESQ.,
Chairman Overseers of the Poor,
Boston, Massachusetts.

DEAR SIR,—*This is to certify that we have audited the books and accounts of the Overseers of the Poor, and those relating to the Trust Funds for the year ended January 31, 1909.*

All moneys received were deposited in the bank, all payments are supported by approved receipted vouchers, and are properly entered on the Cash Books.

Respectfully submitted,

(Signed) AMOS D. ALBEE, SON & Co.,
Public Accountants and Auditors.

FINANCIAL REPORT.

Statement of receipts and expenditures for the year ending
January 31, 1909:

RECEIPTS.

Cash on hand February 1, 1908	\$8,363 66
Drafts on City Treasurer, and requisitions for Temporary Home and Wayfarers' Lodge	143,889 40
Cash from cities and towns	6,005 34
Cash from occupants of Charity Building, for heating	1,186 25
Cash from Commonwealth, for relief	10,290 99
Cash from state and other sources for burials	1,761 79
Aid returned by paupers	576 86
Cash for board of children in Temporary Home	379 40
Receipts on account of aid in City Hospital:	
Cities and towns	\$19,459 56
State of Massachusetts	33,911 33
	53,370 89
Received from State of Massachusetts for account of Homœo- pathic Hospital cases	14 32
Received from State of Massachusetts for Eye and Ear Infirmary	25 00
Receipts from sale of old barrels, etc., by the Supply Depart- ment	249 82
Interest on deposits	180 09
	\$226,293 81

EXPENDITURES.

Amount paid for burials	\$3,567 75
Amount paid cities and towns for relief of Boston poor	12,306 17
Amount paid expenses Temporary Home	6,301 57
Amount paid expenses Lodge for Wayfarers	11,047 25
Amount paid pensions and grants at office	23,313 01
Amount cash paid for relief of persons having no settlement	1,040 40
Amount paid for fuel, 925 tons coal and 14 cords and 7 feet of wood	7,341 19
Amount paid for groceries and expense of delivery	46,337 06
Amount paid salaries of treasurer and secretary	4,500 00
Amount paid salaries of bookkeeper and clerks at office	5,194 81
Amount paid salaries of visitors at office	14,276 83
Amount paid salaries of visitors and clerk at City Hospital	3,948 86
Amount paid office expenses	2,078 84
Amount paid transportation	514 17
Amount paid Charity Building expenses	6,680 95
Amount paid medical attendance and medicine	390 88
Cash paid City Hospital	53,370 89
Cash paid City Collector	20,640 26
Cash paid Homœopathic Hospital, as received from Com- monwealth	14 32
Cash paid Eye and Ear Infirmary	25 00
Cash balance January 31, 1909	3,403 60
	\$226,293 81

PAYMENTS TO THE CITY COLLECTOR DURING THE YEAR.

Receipts from occupants of Charity Building for heating	\$1,186 25
Receipts from cities and towns	6,005 34
Receipts from the state for burials	1,291 86
Receipts from the state for relief of sick and wife settlement cases	1,830 69
Receipts from the state for temporary aid	8,460 30
Receipts for sundry burials	469 93
Receipts from paupers, aid refunded by them	576 86
Receipts for account Temporary Home, board of women and children	379 40
Receipts from sale of barrels by Supply Department	249 82
Interest on deposits	189 81
	\$20,640 26

EXPENDITURES ON ACCOUNT OF LODGE FOR WAYFARERS.

Salaries	\$4,250 34
Groceries and provisions	3,654 41
Furnishing goods and furniture	715 84
Fuel, 105 tons of coal, 20 cords of wood	932 50
Repairs	354 99
Stationery and printing	85 32
Soap and soapstone	34 20
Disinfectants	154 50
Washing sheets and bedding	329 42
Gas and electric lighting	404 73
Cleaning blankets	111 00
Boiler inspection	2 00
Floor dressing	15 00
Medical attendance	3 00
	\$11,047 25

EXPENDITURES ON ACCOUNT OF CHARITY BUILDING.

Fuel, 400 tons coal, 1 cord wood	\$2,476 50
Engineer's salary	1,488 03
Janitor's salary	1,054 35
Disinfectants	30 75
Gas, \$53.35, and electric lighting, \$322.36	375 71
Furnishings	33 51
New vault	649 37
Cleaning	475 65
Sundries	19 08
Boiler insurance	50 00
Spraying vines	28 00
	\$6,680 95
Deduct estimated cost of heating the Temporary Home, included in the above	\$1,758 50
Also amount received from occupants	1,186 25
	2,944 75
Net cost	\$3,736 20

EXPENDITURES FOR CITY TEMPORARY HOME.

Groceries, provisions, etc	\$2,015 53
Salaries	2,100 00
Extra help	38 67
Fuel, 16 tons coal, 3 cords wood	138 20
Gas and electric lighting	288 44
Medical attendance and medicine	\$22 72
Confinement cases	1,140 00
	1,162 72
Furniture and household goods	131 17
Repairs	279 88
Sundries	34 56
Telephone rental and tolls	77 32
Printing	35 08
Estimated cost of heating, included in Charity Building expenditures	1,758 50
	\$8,060 07
Deduct receipts for board	379 40
Net cost	<u>\$7,680 67</u>

Statement of Trust Funds in the Hands of the Overseers of the Poor, Richard C. Humphreys, Treasurer, January 31, 1909.

INVESTMENTS.	Pemberton or General Fund.	Boylston Education Fund.	Boylston Relief Fund.	Mason Fund.	Dexter Fund.	Jeffries Fund.	Lucy Bullman Charity.	David Sears Charity.	Pierce Fuel Fund.	Holton Protestant Pauper Fund.	Holton Protestant Poor Fund.	Stoughton Poor Fund.	Goodnow Fund.	Rachel T. Stevens Fund.	Moses Hunt Fund for the Destitute.	Nathaniel Frederic Thayer Fund.	Thorndike Fund.	Totals.																		
United States two per cent Treasury Bonds				6	\$7,300 00														\$7,300 00																	
Mass. Water Loan three and one-half per cent Gold Bonds.																																				
City of Boston Currency Notes	19	\$133,000 00	21	\$157,500 00	13	\$29,500 00	4	1,850 00	8	\$6,600 00	11	\$8,750 00	23	\$28,250 00	21	\$281,500 00	1	\$1,500 00	7	\$5,250 00	1	\$1,500 00	5	\$4,050 00	6	\$8,750 00	3	\$3,000 00	4	\$11,250 00	3	19,250 00	5	\$5,000 00		5,000 00
City of Sioux Falls five per cent Bonds																																				701,500 00
Fifty Associates' Corporation Stock																																				500 00
Real Estate								19	22,800 00																										22,800 00	
New England National Bank Stock	50	5,000 00																																		*43,566 32
State National Bank Stock	45	4,950 00																																		
Tremont National Bank Stock	23	805 00	6	210 00																																
Union National Bank Stock	32	3,200 00			28	2,800 00																														
Cash in Franklin Savings Bank		4,000 00		1,000 00																																
Cash in Suffolk Savings Bank						2,500 00				500 00																										
Cash in Home Savings Bank																																				
Cash in North End Savings Bank																																				
Cash in Charlestown Five Cent Savings Bank		2,000 00																																		
Cash in Provident Institution for Savings		5,000 00																																		
Investments		\$157,955 00		\$158,710 00		\$34,800 00		\$9,150 00		\$7,100 00		\$9,750 00		\$31,750 00		\$349,866 32		\$1,500 00		\$5,250 00		\$1,500 00		\$4,300 00		\$10,000 00		\$5,700 00		\$11,250 00		\$25,750 00	\$500 00		\$824,831 32	
Cash		744 10		1,760 98		39 32		278 61		29 32				678 20				147 09		214 56				187 97		39 00		223 83				245 89	74 07			
Cash overdrawn														20 63		3,612 00																				
Total		\$158,669 10		\$160,470 98		\$34,839 32		\$9,428 61		\$7,129 32		\$9,729 37		\$32,428 20		\$346,254 32		\$1,647 09		\$5,464 56		\$1,500 00		\$4,487 97		\$10,039 00		\$5,923 83		\$11,243 17		\$25,995 89	\$574 07		\$825,854 80	
Total, January 31, 1908																																				\$20,852 95
Increase																																				\$5,001 85

* Assessors' Valuation for 1908, \$112,000.

TRUST FUNDS.—Cash Accounts, February 1, 1908, to January 31, 1909.

	PEMBERTON FUND.		BOYLSTON EDUCATION FUND.		BOYLSTON RELIEF FUND.		MASON FUND.		DENTER FUND.		JEFFRIES FUND.		LUCY BULLMAN CHARITY.		THE DAVID SEARS CHARITY.		PIERCE FUEL FUND.		HOLTON PROTESTANT PAUPER FUND.		HOLTON PROTESTANT POOR FUND.		STOUGHTON POOR FUND.		GOODNOW FUND.		RACHEL T. STEVENS FUND.		MOSES HUNT FUND FOR THE DESTITUTE.		NATHANIEL FREDERIC THAYER FUND.		THORNDIKE FUND.		TOTALS.	
	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.
Cash, January 31, 1908.....	\$8,826 14		\$2,723 33		\$2,101 72		\$265 87		\$410 38		\$851 49		\$3,114 01		\$626 71		\$140 18		\$135 42				\$277 07		\$964 47		\$563 29		\$74 43		\$1,033 87		\$166 67		\$21,021 63	
RECEIPTS.																																				
Bank Dividends, including Tax Refunded by the State,	1,142 79		10		266 89																														1,409 78	
Interest on City Notes.....	4,635 00		5,577 50		1,100 00		67 26		238 50		318 76		1,012 50		\$10,615 00		52 50		177 50		\$45 00		145 50		312 50		100 00		443 74		578 74		400 00		25,820 00	
Interest on United States Bonds.....							146 00																												146 00	
Gift.....	200 00																																			200 00
Interest on Bonds.....																																				200 00
Interest on Deposits.....	115 17		127 74		20 71		15 57		4 50		9 12		66 69		13 71		10 81		16 62		3 43		15 40		12 03		24 94				8 28		7 40		472 12	
Rents.....													1,400 00		1,556 51											202 10								3,158 61		
Dividends on Fifty Associates' Stock.....															2,280 00																			2,280 00		
PAYMENTS.																																				
Deposits in Savings Banks.....		\$11,000 00		\$1,000 00		\$2,500 00				\$500 00		\$1,000 00		\$3,500 00		2,000 00							\$250 00		\$1,250 00		\$500 00				\$1,000 00		\$500 00		\$25,000 00	
Salary of Chaplains.....								\$216 09																											216 09	
Pensions.....		3,175 00				950 00									14,250 00											100 00		\$525 00		575 00				19,575 00		
Board of Thirty-eight Boys and Girls.....				5,667 69																															5,667 69	
Grants.....												1,415 00							\$102 00															1,517 00		
Paid for Turkeys for Brighton Poor.....																			12 98		48 43													61 41		
Paid Tax on Real Estate in Somerville.....																										66 50									66 50	
Paid for Repairs, Insurance, etc., on Longwood Estate.....															1,200 51																			1,200 51		
Paid for Legal Expenses.....											200 00																								200 00	
Coal.....										124 06							\$56 40																	180 46		
Cash, January 31, 1909.....		744 10		1,760 98		39 32		278 61		29 32			678 20				147 09		214 56				187 97		39 00		223 83				245 89		74 07		1,023 48	
Cash Overdrawn.....											20 63				3,612 00													6 83								
Total.....	\$14,919 10	\$14,919 10	\$8,428 67	\$8,428 67	\$3,489 32	\$3,489 32	\$494 70	\$494 70	\$653 38	\$653 38	\$1,200 00	\$1,200 00	\$5,593 20	\$5,593 20	\$18,077 22	\$18,077 22	\$203 49	\$203 49	\$329 54	\$329 54	\$48 43	\$48 43	\$437 97	\$437 97	\$1,289 00	\$1,289 00	\$890 33	\$890 33	\$525 00	\$525 00	\$1,820 89	\$1,820 89	\$574 07	\$574 07	\$54,708 14	\$54,708 14

TRUST FUNDS IN THE HANDS OF THE OVERSEERS OF THE POOR.

Pemberton Fund.—This fund comprises bequests and gifts made to the City of Boston from 1760 to the present time from “A. B.,” Daniel Oliver, Margaret Blackader, Alice Quick, Anne Wheelwright, Mary Ireland, Benjamin Pemberton, Martha Stevens, Mrs. H. Driscoll, William Breed, Samuel Eliot, John Coffin Jones, Mary Belknap, “A Citizen of Boston,” Anonymous, Miss Dr. Harriot K. Hunt, George Higginson, Walter E. Hawes, William B. Spooner, Rebecca A. Goddard, Matilda Goddard, and Richard C. Humphreys. The most important, however, of the bequests was from Benjamin Pemberton, Esq., whose will was proved June 25, 1782, and for that reason his name has been given to the fund. The income of this fund is to be expended, at the discretion of the overseers, in semi-annual payments to the poor of the city.

Boylston Relief and Education Funds.—These funds were from a bequest by John Boylston, who died in London, England. His will was proved June 12, 1795. One portion of the bequest is ordered to be paid to “poor and decayed householders of the town of Boston, not under fifty years of age, persons of good character, and reduced by the acts of Providence, not by indolence, extravagance, or other vice.” The other portion to be applied to the “nurture and instruction of poor orphans and deserted children of the town of Boston until 14 years of age.”

Mason Fund.—A bequest from Jonathan Mason, by will dated July 15, 1798, interest to be paid annually “to the standing chaplain of the almshouse and workhouse, or by whatever other name called;” interest to be added until one is appointed. The interest is now paid semi-annually towards the salaries of the chaplains of the House of Industry.

Dexter Fund.—A bequest from Samuel Dexter, by will dated May 7, 1811, “for supplying with firewood or coal such poor persons, objects of charity, as are not supported in the almshouse, though sometimes relieved by the Overseers of the Poor.”

Jeffries Fund.—A bequest by David Jeffries, former Town Treasurer. Will dated January, 1786: “Income to

be applied to the purchase of tea, coffee, chocolate, and sugar for the refreshment of those persons, who, in the providence of God, are, or shall be, reduced and obliged to take shelter in the almshouse, after having lived reputably; the Overseers of the Poor to be judges as to the persons, but always giving the preference to the pious poor."

In 1908 the Supreme Court decreed that in addition to the above provisions of the will the income of this fund could be used by the Overseers of the Poor in their discretion for the benefit of Boston poor outside of the almshouse.

Lucy Bullman Charity.—Consists of an estate on Cambridge and Joy streets, in this city, which came into the possession of the City of Boston, in accordance with the will of Lucy Bullman, proved at Probate Court, Suffolk County, January 9, 1832, in which it is provided that, upon the death of certain persons therein named, said estate is given to the City of Boston upon the condition that the estate should never be sold, but the income used for the benefit of the poor. By a vote of the City Council, approved by the Mayor, January 4, 1873, this estate was placed in charge of the Overseers of the Poor.

The David Sears Charity is a fund contributed by the late Hon. David Sears, for the relief of the poor, the income only to be expended "in aid and for the support of citizens or families who may have seen better days, and for charity in all its forms in such a manner as may best tend to alleviate the sufferings of human life and render the condition of the poor more comfortable."

Pierce Fuel Fund.—The legacy of Caleb Pierce to the City of Charlestown, accepted by the City Council of that city May, 1861: "Income to be expended in the purchase of fuel to be distributed to those indigent widows whose husbands, before their decease, had resided in Charlestown at least one year, and the said widows still continuing to reside in Charlestown at the time of receiving said bounty."

Holton Protestant Poor Fund.—A bequest by James Holton to the inhabitants of the town of Brighton: "Income to be annually expended forever in purchasing and distributing provisions among poor and indigent Protestant families in said town of Brighton on Thanksgiving or other holidays, or just previous to such holidays, to the end that such poor Protestant families may have the means, in some degree, of enjoying such holidays in common with their fellow-citizens; and I especially direct that in such periodical distributions unmarried Protestant females who are poor and needy shall receive a liberal share of provisions, and also

other articles of comfort, such as such distributors shall deem to be the most conducive to the comfort and happiness of that lone class of citizens."

Holton Protestant Pauper Fund.—A bequest by James Holton to the inhabitants of the town of Brighton: "Income to be annually expended, in whole or in part, as necessity or circumstances may require, by the selectmen of said town, in providing good and plentiful meals on Thanksgiving day, or other holidays, to the Protestant paupers of said Brighton." If the whole of said income shall not be required to be so expended, then the surplus shall be added to the principal, and if such principal shall ever become thus augmented to three thousand dollars or more, then the surplus interest or income, over what shall be necessary for furnishing said festive meals on said holidays, may be expended by said selectmen for the comfort of the Protestant paupers of said Brighton in such a manner as said selectmen shall judge best and most conducive to the comfort and happiness of such paupers.

Stoughton Poor Fund.—A bequest of Lieut.-Gov. William Stoughton, who died July 7, 1701. By his will he gave £50 to the relief of the poor of Dorchester, to be improved by the care of the Selectmen, the income to be distributed to the most needy inhabitants.

Goodnow Fund.—A bequest of Elisha Goodnow (to be paid over upon the decease of his wife) to the City of Boston and its assigns, "to be invested and the income applied forever to and for the relief, assistance and support of the poor, sick, and infirm in said city, not supported by the said city in its almshouse, in such manner as the said city, or the government or officers thereof, may deem most judicious, but without reference to the religious faith or belief of those who may apply for or need the assistance of this fund." Five thousand dollars, received April 29, 1885.

Rachel T. Stevens Fund.—A bequest of Rachel T. Stevens, the net income to be paid (after the death of a person named in the will) "for the support and maintenance of poor, worthy, Protestant single women of Boston, who have arrived at the age of 50 years (not including widows), paying to each of such women during her life the sum of one hundred dollars in semi-annual payments. Upon the marriage of any beneficiary under this will no further payment of money is to be made to her, nor is any further payment of income to be made to any beneficiary who becomes unworthy of help under this trust."

Moses Hunt Fund for the Destitute.—A legacy from the late Moses Hunt: "The income to be devoted to the relief and welfare of Protestant destitute residents of that part of said Boston which was Charlestown." Ten thousand dollars, received March 7, 1889, has been invested in a City of Boston note.

Nathaniel Frederic Thayer Fund.—A bequest of Caroline C. Thayer (who died about 1891) to be paid over to the city after the death of two sisters, the last of whom died in September, 1899. The fund was received in May, 1900. "Income to be annually appropriated for the benefit and use of Protestant widows and single women, without distinction of color, preference always to be given to those who have seen better days."

In August, 1900, a small sum was received under the will of Susan T. Balch, which was added to this fund in accordance with the wish of the donor.

Thorndike Fund.—Extract from will of George L. Thorndike, proved June 11, 1901: "I give, devise, and bequeath to the City of Boston ten thousand dollars (\$10,000) in trust forever; the income from the same is to purchase coal to be distributed to deserving widowed women of East Boston."

By a vote of the City Council, approved by the Mayor December 19, 1907, the income of the fund is paid to this Board.

OVERSEERS OF THE POOR, 1908-1909.

[One-third of the Board is appointed annually by the Mayor, subject to the approval of the Board of Aldermen.]

Terms expire April 30, 1909.

MARTHA W. FOLSOM,
JOHN BRANT,

MATTHEW J. MULLEN,
JOSEPH A. TURNBULL.

Terms expire April 30, 1910.

WILLIAM P. FOWLER, *Chairman*.
THOMAS SPROULES,

THOMAS DOWNEY,
MARGARET J. GOOKIN.

Terms expire April 30, 1911.

PATRICK J. GREENE,
SIMON E. HECHT,

JOHN H. COLBY,
FREDERICK P. CABOT.

RICHARD C. HUMPHREYS, *Treasurer*.
BENJAMIN PETTEE, *Secretary*.

The Board meets on the first Wednesday of every month at its office in Charity Building.

The Overseers of the Poor are likewise incorporated as a Board of Trustees of John Boylston's and other charitable funds, left for the assistance of persons of good character and advanced age, "who have been reduced by misfortune to indigence and want."

COMMITTEES.

Investigation and Relief.

Messrs. Fowler and Sproules, Mrs. Folsom, and Messrs. Greene, Downey, Brant and Mullen.

Office Matters.

Messrs. Sproules, Downey and Fowler.

Finance and Accounts.

Messrs. Colby, Hecht and Cabot.

Employments, Settlements and Legal Questions.

Messrs. Mullen and Brant and Mrs. Gookin.

Supplies.

Messrs. Greene, Fowler and Cabot.

Temporary Home.

Mr. Sproules, Mrs. Folsom and Mrs. Gookin.

Lodge for Wayfarers and the Woodyard.

Messrs. Fowler, Greene and Downey.

Building.

Mrs. Folsom, Messrs. Brant and Turnbull.

Real Estate.

Messrs. Greene, Sproules and Colby.

Medical Affairs and Hospital Matters.

Messrs. Downey, Turnbull and Hecht.

Burials.

Messrs. Turnbull, Mullen and Colby.

Boylston Education Fund Beneficiaries.

Mr. Brant, Mrs. Folsom and Mr. Hecht.

Holton Funds.

Mr. Mullen, Mrs. Gookin and Mr. Cabot.

MEMBERS OF THE BOARD FROM ITS REORGANIZATION IN 1864.

[Overseers of the Poor were first chosen in Boston in 1691.]

-
- * Allen, Ira, 1868 to 1875 (died August 29).
 - * Amory, Thomas C., 1864 to April, 1883.
 - * Atkins, Ebenezer, 1864 to December 31, 1867 (died).
Ayer, James B., April, 1890, to May, 1893.
 - * Bailey, Joseph T., November, 1866, to 1871.
 - * Bigelow, Alanson, 1875 to April, 1881.
 - * Blasland, Thomas, 1866 to 1873 (died September 5).
Brant, John, May, 1903, to date.
 - * Buckley, Joseph, 1864 to 1875.
 - * Burnham, Daniel S., from April, 1885, to May, 1891.
Cabot, Frederick P., July, 1908, to date.
 - Campbell, B. F., October, 1882, to July, 1888.
 - * Campbell, Isaac T., 1873 to June, 1899 (died).
 - * Caton, Asa H., December, 1890, to 1893.
Colby, John H., May, 1908, to date.
 - Coleman, Charles, 1893 to May, 1896.
 - Conley, James H., May, 1900, to September, 1906.
 - * Crane, P. M., 1870 to 1882 (died August 13).
 - * Cruft, Samuel B., 1871 to 1877.
Cunningham, Henry V., 1893 to April, 1898.
 - * Curry, M. C., 1883 to May, 1896.
 - * Curtis, George, 1876 to September, 1878.
Davis, James G., 1880 to 1886.
 - * Day, Frederick W., May, 1898, to January, 1899.
Derby, William P., October, 1907, to May, 1908.
 - * Dore, John P., 1879 to May, 1891.
Downey, Thomas, Jr., 1887 to April, 1890, May, 1891, to
January, 1895, and May, 1902, to date.
 - * Fabyan, George, 1869 to 1874 (died May 25).
Fisher, Andrew P., from April, 1889, to May, 1893.
 - Folsom, Martha W., November, 1900, to date.
 - Fowler, William P., from April, 1889, to date.
 - * Friedman, Solomon, 1886, to December, 1890.
 - * Gargan, Thomas J., 1874 to 1875.
Gookin, Margaret J., May, 1908, to date.
-

- * Gorman, William, 1877 to 1880 (died January).
Greene, Patrick J., October, 1900, to date.
- * Griffin, Martin, 1864 to 1869.
- * Hale, George S., 1865 to 1871.
Hecht, Simon E., May, 1908, to date.
- * Hull, Liverus, 1874 to April, 1883.
Humphreys, Richard C., May, 1890, to September, 1898.
Hyneman, Bernard, May, 1902, to May, 1908.
Jordan, Michael J., May, 1902, to May, 1903.
- * Kerrigan, Michael A., April, 1898, to October, 1900 (died).
- * Lamb, John, 1891 to May, 1897.
- * Lawrence, William R., 1864 to November, 1865.
- * Lincoln, F. W., May, 1867, to April, 1878.
- * Little, James L., November, 1865, to November, 1876.
Logue, Charles, May, 1896, to January, 1898.
- * Lothrop, Loring, 1864, to April, 1870.
- * McLean, Charles R., 1868 to 1871.
Madden, Daniel A., 1883 to April, 1889.
Mullen, Matthew J., July, 1897, to May, 1900, and May, 1906, to date.
Nazro, Frederic H., March, 1900, to May, 1902.
Newell, Otis K., from July, 1888, to May, 1891.
- * Newmarch, S., 1864 to 1865.
North, Frederic O., May, 1905, to May, 1908.
O'Brien, John, 1871 to 1874.
O'Brien, Louise S., April, 1898, to May, 1901.
- * Parker, Augustus, November, 1878, to April, 1880.
Parker, Charles F., June, 1895, to May, 1898.
- * Parker, F. E., 1864 to 1875.
Patton, John S., May, 1902, to May, 1904.
- * Pickering, H. W., 1875 to April, 1884.
Pierce, J. Homer, from October, 1898, to April, 1902.
Plummer, Henry L., January, 1899, to May, 1902.
Prescott, Washington L., 1875 to December, 1878.
Quinn, Annie E., May, 1899, to May, 1908.
- * Richards, Henry L., 1877 to August, 1878.
- * Richards, Joel, 1864 to 1866.
- * Ring, Thomas F., November, 1878, to April, 1887.
Rogers, Annette P., 1891 to October, 1900.
- * Sawin, Samuel D., April, 1884, to July, 1890 (died).
Sawyer, Edwin F., May, 1904, to May, 1907.
- * Scott, John A., April, 1881, to April, 1884.
- * Spooner, William B., 1864 to 1868.
Spooner, William H., May, 1901, to May, 1905.

- Sproules, Thomas, 1883 to date.
- * Stackpole, Stephen A., 1880 to April, 1883.
 - Stuart, Frederick W., December, 1896, to April, 1906.
 - * Sullivan, Daniel F., 1893 to June, 1895.
 - * Sweetser, John, December, 1878, to April, 1879.
 - * Temple, Thomas F., 1870 to April, 1890.
 - Thorndike, Rachel E. S., May, 1896, to April, 1899.
 - Turnbull, Joseph A., October, 1906, to date.
 - * Turner, John, September, 1890, to May, 1893, and January, 1895, to November, 1896.
 - * Warren, John W., 1864 to April, 1866.
 - Welch, William J., April, 1884, to April, 1889.
 - Willcutt, Levi L., 1878 to April, 1885.
 - * Winthrop, Robert C., 1864 to May, 1867.
 - Wolcott, Edith P., 1893 to May 1901.

Chairmen.

- * Winthrop, Robert C., July, 1864, to May, 1867.
- * Lincoln, F. W., June, 1867, to April, 1878.
- * Temple, Thomas F., April, 1878, to December 31, 1878, and from April, 1881, to April, 1890.
- * Amory, Thomas C., January, 1879, to April, 1881.
- Newell, Otis K., April, 1890, to May, 1891.
- Fowler, William P., May, 1891, to date.

Treasurers.

- * Warren, John W., July, 1864, to January, 1865.
- * Norcross, Otis, January, 1865, to January, 1876.
- * Higginson, George, 1876 to 1878.
- * Lincoln, F. W., April, 1878, to September, 13, 1898 (died).
- Humphreys, Richard C., November, 1898, to date.

Secretaries.

- * Pratt, John, July, 1864, to November, 1874 (died).
- Pettee, Benjamin, November, 1874, to date.

* Dead.

SCHEDULE OF PROPERTY IN CHARGE OF THE BOARD FEBRUARY 1, 1908.

Charity Building.—The four rooms occupied by the Board and its officers have furniture needed for their use—desks, cases, chairs, etc.

City Temporary Home is supplied with furniture necessary to provide temporary accommodations for homeless women and children.

The Lodge for Wayfarers, for men, has furniture suitable for its use. At the Lodge and at the wharf hired for the storage of wood there are at the present time about 200 cords of wood.

In a storehouse in the yard of the Charity Building are the following groceries for delivery to the poor, also store fixtures:

21 $\frac{2}{3}$ bbls. sugar.	61 $\frac{1}{2}$ -lb. boxes cocoa.
15 $\frac{3}{4}$ chests tea.	25 bushels potatoes.
15 $\frac{2}{3}$ boxes soap.	7 bushels peas.
106 lbs. Indian meal.	32 lbs. cotton twine.
874 lbs. rice.	50 lbs. jute twine.
4 bbls. salt pork.	12,00 tags.
138 bbls. of flour.	20 dry measures.
44 packages paper bags.	8 tunnels.
181 baskets.	5 chairs.
435 lbs. paper.	1 truck.
6 scales.	1 hatchet.
4 scoops.	1 meat saw.
2 desks.	3 butcher knives.
17 $\frac{1}{2}$ bushels beans.	1 meat hook.
9 $\frac{3}{4}$ bbls. oatmeal.	2 shovels.
694 lbs. salt fish.	1 chisel.
245 cans condensed milk.	



ANNUAL REPORT
OF THE
PARK DEPARTMENT
FOR THE YEAR 1908.

COMMISSIONERS' REPORT.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— With a diminished appropriation, we have done our best during the past year to maintain as far as possible the high standard of maintenance of our parks and playgrounds, which is their due, and which is demanded by their world-wide reputation.

In spite of the closest supervision and the most careful attention to economical methods of repair, the area of worn-out roads increases with each year, until we now have about seven miles of roadway that need a thorough resurfacing. This is a work that cannot be longer postponed, as the roads are worn to their foundations in many places.

In other branches, too, of our maintenance work unprofitable economy has had to be practiced to bring our expenditures within our income. Plantations of young trees do not receive the cultivation or the fertilization they should have for their proper development; in the older woodlands much pruning of dead or diseased limbs remains undone, while improvements, like that of the planting of trees on the exten-

sion of Commonwealth avenue, are delayed to the detriment of the appearance of the city and its taxable valuation. Our appropriations for maintenance have not kept pace with the additions to our territory and to its needs of development. Increased wages and shortened hours of labor have added much to our expenses, while the suppression of the gypsy and brown-tail moths have been also a heavy drain on our maintenance account.

Investigation shows that the Park Department of Boston is maintained at a much less cost per acre than the park departments of five of the principal cities of the United States, although Boston's Park Department owns a larger proportion of playground area whose maintenance is costly in comparison with park area.

For construction we have had but little money given us, and that often for objects not requested and not needed by the department. Our most pressing wants are for sanitary, shelter and locker buildings and other improvements on our playgrounds.

We are glad to report our continued and growing satisfaction with the results obtained by the use of oil for the suppression of dust on our roads. They are kept permanently free from dust at less than half the former cost of watering, which was only effective for a portion of the day, and in addition, a considerable saving is effected in road repairs through the better bonding of the surface by the asphaltum in the oil.

There are still playgrounds needed in thickly settled districts of the city, some of which could be obtained with the money already appropriated by the city for playgrounds not asked for nor approved of by us.

All further necessary information as to the work of the department during the past year will be found in the accompanying report of our superintendent.

Respectfully submitted,

CHARLES E. STRATTON,
JAMES M. PRENDERGAST,
DANIEL H. COAKLEY,

Commissioners.

January 31, 1909.

SUPERINTENDENT'S REPORT.

TO CHARLES E. STRATTON, JAMES M. PRENDERGAST, and
DANIEL H. COAKLEY, *Commissioners*:

GENTLEMEN,—I herewith submit a report of the work performed in the department under the direction of your Board during the year 1908:

FRANKLIN PARK.

By the rapid growth of the trees, the young plantations throughout the park system are fast assuming the character of woodlands. This is especially noticeable in Franklin Park, where the oaks, beeches, maples, etc., which were planted as saplings nine to twelve years ago, now range from 15 to 30 feet in height. The pines and hemlocks, too, show a corresponding excellent growth. These good results have been brought about by a thorough use of the horse cultivator, in loosening the surface of the ground under the trees, for four or five years after planting. The results would have been still more pronounced had our finances enabled us to continue this process to a later date. Five or six years ago the plantations were seeded down, and since then only such hand cultivation as our appropriation would allow has been given to individual trees.

The old spring at Abbotswood, having become unfit for drinking purposes during the past summer, was abandoned and the flow cut off. The fountain was then moved inward from the walk and connected with the city supply. A space was reserved around the fountain for fixed seats, to form a rendezvous or rest, and a convenient walk, connecting the fountain with Canterbury street, was constructed.

A constantly increasing number of visitors come to Franklin Park, especially on Sundays, when the links, the meadows and the woodlands are well besprinkled with groups of people.

ARNOLD ARBORETUM.

The lack of funds prevented the rebuilding of the remainder of the settled portion of the boundary wall. The usual maintenance work was done.

THE FENS, RIVERWAY AND OLMSTED PARK.

During the past year these parks and parkways received nothing more than the ordinary maintenance attention. Considerable filling has been received at the new Fens playground, at a cost only of the labor required to grade it. An area of four or five acres is now graded to a surface fine enough for play, and is much used by the pupils of the group of school buildings near by.

Your superintendent would again call the attention of your board to the sterile character of the Fens filling, which is a water-washed coarse sand and gravel, overlaid with only a thin covering of loam, and the necessity of reinforcing the loam covering. Under the present conditions good tree growth cannot be produced, and in many parts even the shrubbery is much stunted. From the same cause the Norway maples lining the roadways, which are intended to provide shade for the drives and walks, are barely existing.

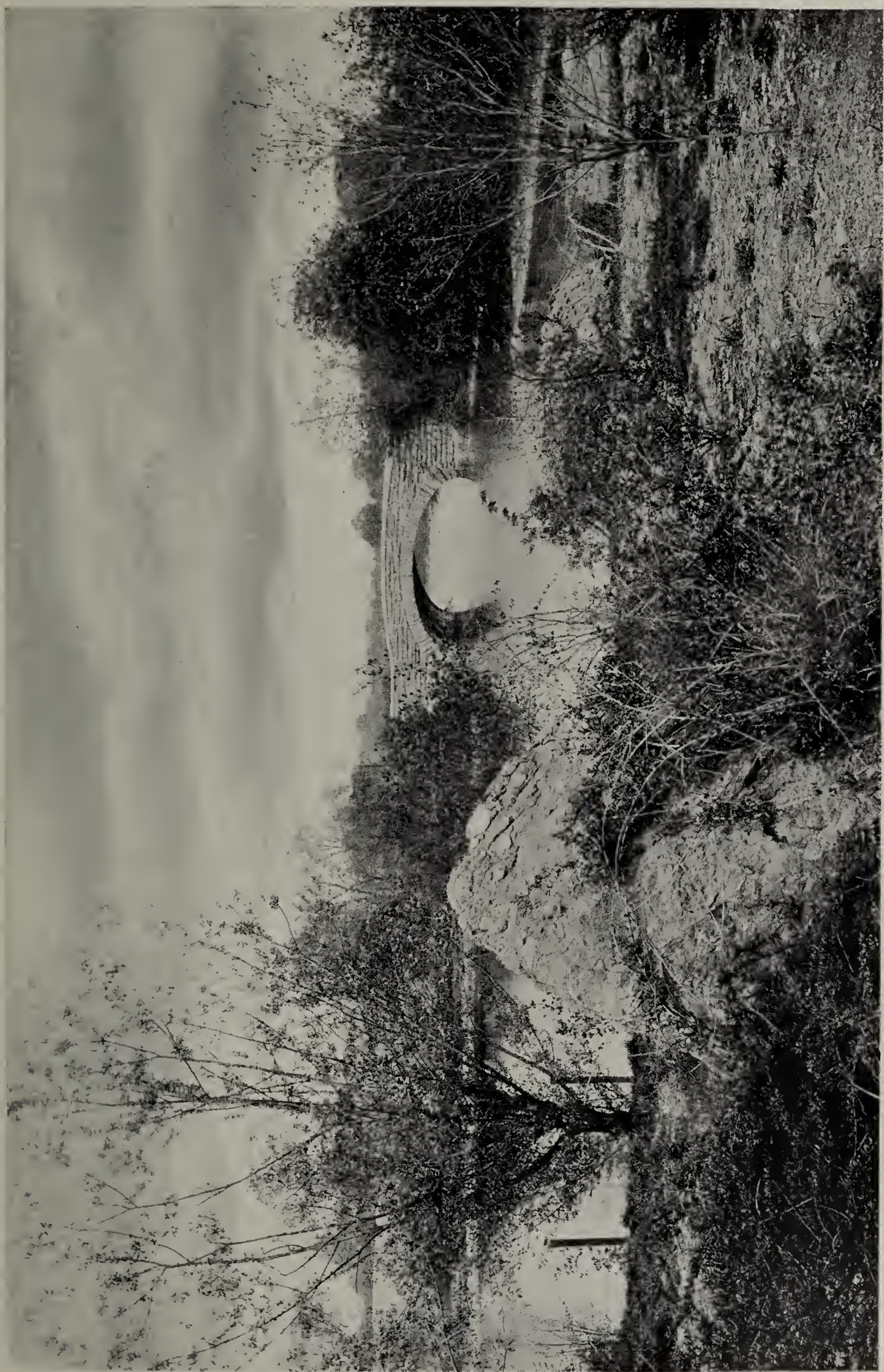
COMMONWEALTH AVENUE.

In that portion of Commonwealth avenue lying between Brookline avenue and the Newton city line, the preparation of the ground and the continuation of the work of planting shade trees had to be deferred, no appropriation having been made to continue this important work. For the same reason road repairs were discontinued. In consequence, the driveways between Brookline and Brighton avenues are in bad condition. Those portions of the avenue that have been resurfaced since the avenue was placed in your charge are in good condition, in spite of the hard usage to which they are subjected by fast-driven automobiles.

CHARLESBANK.

The Charles River Basin Commission not occupying so much of our ground last year as previously, in its operations in the Charles river, the usefulness as well as the enjoyment of this popular park and playground was not so much interfered with as in the preceding two years.

Under the wise supervision of Mrs. Kate Gannett Wells and Mrs. Anna Phillips Williams, whose report will be found elsewhere, the women's gymnasium and the children's playground in connection with Charlesbank have had a very successful season. The total attendance at the men's gymnasium for the season was 141,200.



SCARBORO POND. — FRANKLIN PARK.

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

WOOD ISLAND PARK.

This much appreciated breathing spot for the people of East Boston continues to increase in attractiveness. The trees with which the slopes are planted are making a fine growth and afford a fair measure of shade. The ball ground, the cricket creases and the tennis courts are well patronized. The attendance in the men's outdoor gymnasium for the season was 34,600. In winter the gymnasium and ball grounds are flooded for skating and many enjoy the sport. Only the ordinary work of maintenance was performed at this park during the past season.

MARINE PARK, CASTLE ISLAND AND STRANDWAY.

On account of the cooling breezes from the bay, this part of the park system, during the summer, is the most used. The opening of Fort Independence to the public has furnished an additional object of interest to visitors at Castle Island. The parade ground within the fort will, when graded a little, serve admirably as a playground. The casemates, now open, give much needed shelter during sudden storms.

The work of filling the pond at Marine Park progresses slowly, on account of the scarcity of filling and the large amount required, the depth of the pond being about twenty-eight feet. Nearly one-half of the area is filled. When the filling is completed a most useful recreation ground of about four acres will be added to the park.

Although a late storm broke a number of willows and poplars at Marine Park, the long stretch of trees and shrubs on the Strandway is doing well, notwithstanding the bleakness of the situation.

The boat service between Castle Island and Marine Park was conducted on schedule time last season.

CHARLESTOWN HEIGHTS PARK, CHESTNUT HILL PARK, WEST ROXBURY PARKWAY, DORCHESTER PARK, COPP'S HILL TERRACES AND BERNERS SQUARE.

Only the regular work of maintenance was done during the past season.

PARKWAYS AND THE MAINTENANCE OF PARKWAYS.

Road maintenance is a matter of much greater importance and consideration than it was before the advent of the automobile. Roads that would stand under the pressure

of the greatest weight of ordinary horse-drawn traffic, or the pounding of the swiftly driven horses attached to light vehicles, now rapidly disintegrate under the traction and twisting action of the hind wheels of automobiles when driven at a rapid rate. A speed of 15 or 16 miles an hour can be provided for on a good macadam road, but for a speed exceeding this some other form of road is necessary or some method of more strongly bonding macadam roads must be devised. Tar has been tried for this purpose but the results have not been satisfactory. Asphaltum, doubtless, would last longer as a binding for roads than tar. These materials, however, depend on the oils which enter into their composition to retain their plasticity; when they volatilize, their bonding properties are lost and the road disintegrates. A concrete of crushed stone and Portland cement, possibly, is the best material of which the coming road may have to be made to stand the wear and tear of automobile travel, which will include among its probabilities the movement of heavy traffic.

For park roads, or roads used for light traveling, including automobiling, a Portland cement concrete road, finished off with a roughened face, to enable it to hold a surfacing of dead sand, and the sand oiled, would, I think, prove satisfactory. This belief is founded on the results of an experiment, made on the surface of a piece of bitulithic pavement, where the rough, worn surface of the tar concrete was so covered, and formed when oiled a most pleasant driving surface.

From lack of funds your department has not been able to maintain its parkways in the state of repair necessary for pleasure driving. For ten years past the roads have been softened with water, then rolled down to a smooth surface, until, in many places, this process cannot be carried any further, as these places are worn to the foundations, which crop up above the surface. This is especially noticeable in the Riverway and Fenway, which need resurfacing between Huntington avenue in the Riverway, and Huntington entrance in the Fens. Commonwealth avenue requires about eight miles of resurfacing. Such roads as we have been able to resurface in the past three years have been kept in very good condition by the use of a coating of dead sand, held in a semi-moist condition by sprinkling it with an emulsion of petroleum containing a heavy asphaltum base. If this light cushion of oiled sand is kept intact, little wear or damage will be done to the surface of the road. This can be proved by a stretch of road so treated on Commonwealth avenue,



SCARBORO HILL. — FRANKLIN PARK.

between Warren street and the Newton city line, which has been under the constant pounding of high-speeding automobiles since it was resurfaced two years ago.

The oiling of the roads for dust suppression may now be considered a success. The cost per square yard for the season of 1908 was \$0.0184, or \$323.84 per mile of road 30 feet wide, as against a cost of \$0.0213 per square yard for the season of 1907, or \$374.88 per mile of road 30 feet wide. Watering, which lays the dust indifferently, cost your department (computed from observations and estimates by Mr. Putnam) about \$680 per mile of road 30 feet wide, or more than twice the cost of oiling.

The following table shows the cost of the maintenance of roads for the past seven years, together with the average cost for the seven years. This table includes all labor, teaming, road repairs and oiling for the suppression of dust.

MAINTENANCE OF ROADS.	Square Yards.	COST PER SQUARE YARD.						
		1902.	1903.	1904.	1905.	1906.	1907.	1908.
Commonwealth avenue, Arlington street to Beacon street	60,600	\$0.216	\$0.244	\$0.215	\$0.242	.....	\$0.218	
Commonwealth avenue, Beacon street to Newton line	203,700	.....	.....	.....	.....	.....	.083	
Commonwealth avenue, Arlington street to New- ton line	264,300	.....	.....	.....	.....	\$0.211	.122	\$0.131
Fens, Riverway, Olmsted Park, Arborway, Co- lumbia road, and Marine Park	372,800	.075	.079	.105	.092	.121	.120	.067
Franklin Park and Arnold Arboretum	210,100	.079	.079	.074	.076	.068	.068	.023
Average	847,200	\$0.091	\$0.096	\$0.105	\$0.101	\$0.136	\$0.108	\$0.073

Average cost of maintenance for seven years of all park roads except at Chestnut Hill Park, \$0.106 per square yard.

PARKS, PLAYGROUNDS AND ROADS.
COST OF MAINTENANCE PER ACRE, 1902 TO 1908, INCLUSIVE.

PARK OR PLAYGROUND.	AREA.	COST PER ACRE.						
	Acres.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
1. { Commonwealth avenue	*30.0	\$698	\$713	\$628	\$691			
1. { Commonwealth avenue, with extension to Newton line	112.7	.....	.....	.....	.....	\$553	\$376	\$465
2. Fens	115.0	124	126	145	120	169	170	148
3. Riverway	40.0	288	362	321	384	427	450	324
4. Olmsted Park	180.0	128	131	117	129	150	166	138
5. Arborway	36.0	196	190	217	269	300	363	359
6. Arnold Arboretum	223.0	27	22	26	25	33	31	18
7. West Roxbury Parkway	150.0	8	3	3	7	7	21	12
8. Franklin Park	527.0	110	111	97	103	106	139	115
9. Columbia road	31.2	140	131	227	233	295	276	174
10. Strandway	71.3	4	14	42	60	125	177	161
11. Marine Park	52.5	125	118	111	175	174	231	230
12. Wood Island Park	55.6	118	131	121	143	159	184	179
13. Charlesbank	10.0	1,096	1,100	1,003	933	959	1,161	1,483
14. Trinity Triangle	0.12	18	.....	184	.....	11	77	43
15. Charlestown Heights	6.1	452	369	307	417	489	579	607
16. Charlestown Playground	14.0	109	111	113	107	127	110	111
17. Dorchester Park	26.0	22	18	44	51	69	67	79
18. Franklin Field	77.0	113	78	72	91	92	112	113
19. Copp's Hill Terraces	0.6	586	817	823	647	776	1,498	1,255
20. Chestnut Hill Park	55.4	67	92	79	106	113	119	108
21. North Brighton Playground	14.0	142	76	75	93	99	175	241
22. Neponset Playground	18.0	86	43	76	80	75	77	87
23. Billings Field	11.0	160	93	102	88	92	112	77
24. First Street Playground	4.6	229	241	631	448	519	677	718
25. Prince Street Playground	0.4	590	739	2,042	2,257	2,607	2,511	2,938
26. Mystic Playground	2.3	750	328	286	352	497	422	638
27. Fellows Street Playground	0.85	1,732	806	535	814	1,122	1,184	1,255
28. Christopher Gibson Play- ground	5.8	374	296	258	301	279	261	279
29. Columbus Avenue Play- ground	5.0	629	393	323	453	459	333	396
30. Ashmont Playground	2.2	20	.....	24	332	439	422	333
31. Savin Hill Playground	6.9	157	108	194	160	328	269	299

* At the end of 1905, 82.7 acres were added by the placing of that portion of Commonwealth avenue west of Brookline avenue and extending to the Newton city line, under the care of the Park Department, making the total improved area of parks, playgrounds and roads now maintained 1,896 acres.

PARKS, PLAYGROUNDS AND ROADS — *Concluded.*

PARK OR PLAYGROUND.	AREA.	COST PER ACRE.						
	Acres.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
32. Roslindale Playground.....	3.7	413	160	203	235	216	269	199
33. Forest Hills Playground....	9.6	14	32	130	86	59	29	81
34. Rogers Park.....	6.9	164	131	48	167	220	246	125
35. Cottage Street Playground..	3.8	86	37	122	181	193	337	374
36. Randolph Street Play-ground.....	2.8	.....	.....	455	725	609	887	1,197
37. Marcella Street Playground,	5.1	.....	64	272	315	608	480	594
38. Commonwealth Playground,	8.1	.....	8	.....	5	71	59	120
39. Oak square.....	0.22	176	368	58	118	93	.....	.....
40. Berners square	1.2	.....	.....	.....	.....	.....	.....	12
Average	1,813.3	\$121	\$112	\$111	\$124	\$163	\$162	\$155

GYPSY AND BROWN-TAIL MOTHS.

These pests show no signs of diminution; in fact, the gypsy moth is increasing in numbers and spreading more widely over New England, and, unless diseases or parasites come to aid, the scourge may as easily extend over the whole country. There may be even now, by transportation by rail of the larvæ or eggs of the insects, hundreds of colonies established in various parts of the United States, not reported because not recognized. They may be controlled, if not exterminated, in cities and towns, as we are able to control them in the park system, by creosoting the egg masses or by spraying the foliage with a poisonous solution, and thus kill the larvæ. Expenditures in the Park Department for moth suppression amounted to \$11,662 in 1907, and \$11,092 in 1908. We now have seven power spraying machines and shall need two additional machines this season to meet the invasion of these pests from outside territory.

SPORTS.

Of all the sports for which the Park Department provides facilities, baseball takes the lead. In the various parks there are seventy-three regularly laid out diamonds, with permanent backstops; canvas bases are furnished to the players. Tennis ranks next, for which game one hundred and two courts are laid out, including the posts for the nets. Twenty-four football fields were marked out and equipped with goal posts last year. Although the past season was a poor one for

making ice, it is estimated that about 255,000 persons enjoyed the sport of skating on the various skating areas in the department. Five cricket creases were kept in order for this game, which is increasing in popularity very fast. Lack of continued cold weather was disastrous to the game of curling; on only two or three days could the game be played. The weather, too, was not suited to a successful tobogganing season. The two chutes were, however, well patronized when the sport was good, and on busy evenings a wait of ten minutes for a chance to coast was sometimes necessary. The total number who enjoyed the sport is estimated at 18,975 during the season. The bowling green, with its area of 126 feet square, seemed to contribute to the pleasure of more persons, relatively to its size, than any other sport; its capacity was strained last year. The attendance of golfers on the links amounted last season to 17,050, as against 16,532 in 1907. No charge is made by the department to anyone participating in the sports for which provision is made. Locker and bathing privileges are also free, except at Marine Park, where a small charge is made by the lessee from the city for the use of a suit and closet.

FRANKLIN FIELD.

Talbot and Blue Hill avenues.

(77 Acres.)

On account of the lack of funds, the sanitary accommodations and plumbing are still lacking in the field house, and an appropriation for these and for some necessary grading is much to be desired. The house, however, served well for shelter and for locker privileges. The increasing use of Franklin Field will soon make necessary the grading of a part of the old nursery, to add to the area of ground available for play. With this in mind, studies will at once be made for the consideration of your Board. Besides the facilities offered in this fine field for summer sports, about thirty acres are flooded in winter for skating.

The nursery, which occupies a part of Franklin Field, contains about 22,469 shrubs and 14,241 trees, which are in good condition for transplanting into the parks.

CHRISTOPHER GIBSON PLAYGROUND.

Dorchester avenue and Park street.

(5.8 Acres.)

This playground is equipped for baseball, football, quoits, tennis, jumping the bar and putting the shot. A portion of

the grounds is also laid off for a children's corner, which is in charge of a female teacher. The playground is provided with a building for shelter and sanitary accommodations. Grading and fencing are much needed.

SAVIN HILL BEACH AND PLAYGROUND.

Springdale and Denny streets, Dorchester.

(18.6 Acres.)

This beach is a popular bathing place, where closets are furnished to women and lockers to men and boys, which are free to all who bring towels and suits. These closets and lockers have a capacity, at one time, for eight hundred bathers, or an average of about three thousand at each tide.

During the past season an appropriation of five thousand dollars was expended for grading the playground, which lies behind the bath houses. The site of the playground was a salt meadow, which the filling and grading made available for ball playing. This area was flooded during the past winter for skating. An appropriation is needed for sanding the bathing beach and for filling to strengthen the dike.

NEPONSET PLAYGROUND.

Neponset avenue.

(18 Acres.)

Only a part of this playground has been covered with loamy gravel and graded for ball playing. The demand is for more space available for play, and an appropriation for this purpose is desirable.

This playground contains a children's corner, with apparatus, supervised by a female teacher. A building containing sanitary accommodations is provided. Skating is enjoyed in winter.

MYSTIC PLAYGROUND.

Chelsea street and Mystic river.

(2.3 Acres.)

Equipped with a children's corner, containing simple apparatus, under the care of a female teacher. The playground has space for a small diamond for boys. Sanitary accommodations are much needed.

ROGERS PARK.

Lake and Foster streets.

(6.9 Acres.)

A clump of Babylonian willows across the upland of Rogers Park, together with a stretch of sloping lawn, has a pleasing,

restful effect. The playground area, which contains two baseball diamonds, could be considerably enlarged were a brook that runs across one corner put underground in a culvert. Shelter and sanitary accommodations are much needed. An appropriation for these requirements and for the preparation of the ground and the planting of trees around the boundaries of the playground is necessary.

NORTH BRIGHTON PLAYGROUND.

Western avenue and North Harvard street.

(14 Acres.)

A part of this playground has been filled and graded to make it available for sports. A building furnishes locker and sanitary accommodations. A quoit ground with clay ends is railed off in one corner. The graded area contains space for three baseball diamonds or for football; a skating area is also provided in winter. Appropriations are needed for filling and grading for playground extension, and for the preparation of the ground and the planting of bordering shade trees.

BILLINGS FIELD.

La Grange street, near Centre street, West Roxbury.

(11 Acres.)

The plantation of trees on the Bellevue street slope is progressing finely, and will soon afford abundant shade for onlookers of the games. Provision is made for ball playing, tennis and skating. A sanitary and locker building is needed. The body of the field has been filled on a peat bed, which has given considerable trouble by unequal settlements from the pressure of the overlaid filling.

ROSLINDALE PLAYGROUND.

South, Walter and Robert streets.

(3.7 Acres.)

On this much-used playground facilities for ball playing, tennis and skating are provided. A sanitary and locker building is needed.

COLUMBUS AVENUE PLAYGROUND.

Columbus avenue and Camden street.

(5 Acres.)

This playground contains space for four baseball diamonds and a children's playground. Ice for skating is furnished in winter.

For several years past this playground has been under the control of a committee of the Civic League, which equipped the children's playground with apparatus and with teachers. This charge was given up by the League last spring

Sanitary accommodations are much needed here, also a large amount of repairs.

PRINCE STREET PLAYGROUND.

Prince and North Bennet streets.

(0.4 Acres.)

This little recreation area has six or seven schoolhouses within 350 feet of its center. Its equipment of teeter boards, swings and sand boxes is in constant use by the children. A female teacher is in charge during the summer months. Sanitary accommodations are needed.

FIRST STREET PLAYGROUND.

Corner of M street, South Boston.

(4.6 Acres.)

This playground contains a well-equipped outdoor gymnasium; a building with locker, bathing and sanitary accommodations; and a ball field with space for two diamonds. Ice is furnished in winter for skating.

FELLOWS STREET PLAYGROUND.

Fellows and Hunneman streets.

(0.85 Acre.)

Contains a handball court of two stalls. It is equipped also with a shelter, swings and other simple apparatus for children's use. A female teacher is in charge. Sanitary accommodations are much needed.

COTTAGE STREET PLAYGROUND.

Near Maverick street, East Boston.

(3.85 Acres.)

Equipped with a children's corner and shelter, also a building, which was erected during the past season, containing sanitary accommodations. There is space for three baseball diamonds and a quaiting ground which occupies one corner. Ice for skating is furnished in winter.

FOREST HILLS AND MOUNT HOPE PLAYGROUND.

Between Washington and Florence streets.

(9.6 Acres.)

A fine piece of land, which, by simple drainage, has been made fairly available for ball games. Grading would improve the ground, but sanitary and locker accommodations are more necessary.

MARCELLA STREET PLAYGROUND.

Corner Ritchie street.

(5.1 Acres.)

This playground is equipped for ball games, and, being located in a populous district, is much used. Lockers and spray baths for men and women are now installed in the building, which also contains sanitary accommodations. The slope of the ground, being over 2 feet per 100 feet, will not permit of flooding for skating. The removal of the ledge outcrop in the grounds would add much needed space for sports.

RANDOLPH STREET PLAYGROUND.

Albany and Randolph streets.

(2.8 Acres.)

This convenient and compact playground contains a building with sanitary and bathing accommodations. A large room in the upper story has been refloored and now serves well for an indoor gymnasium for children. Under the supervision of the ladies of the South End House, a number of working girls spend the noon hour in the gymnasium.

One corner of the playground is fitted up for a children's corner, which contains simple apparatus. This is under the charge of a female teacher. The remainder of the playground is fitted out for baseball diamonds. Ice is furnished in winter for skating.

COMMONWEALTH PLAYGROUND.

C, D and Cypher streets, South Boston.

(8.07 Acres.)

This playground has sanitary accommodations and a large space for baseball playing; the grounds are also flooded for skating in winter.



RANDOLPH STREET PLAYGROUND.

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

CHARLESTOWN PLAYGROUND.

Main and Alford streets.

(14 Acres.)

The outdoor gymnasium in this playground is now completed. It contains within its fence a varied assortment of apparatus. The playground also contains a handball court and four baseball diamonds. Skating is provided in winter. A building containing sanitary and locker accommodations is much needed.

STRANDWAY PLAYGROUND.

Columbia road, opposite Newman street.

(14 Acres.)

The filling of the flats by the Street Cleaning and Sanitary Divisions, together with filling received from contractors for excavations, during the past nine years, has progressed so rapidly that the department now has an area of 12 acres, which is already graded for playground purposes.

A portion of the grounds is set apart for the use of children, where teeter boards, tilting ladders and other simple apparatus are furnished. A female teacher is in attendance. A large part of the ground is flooded in winter for skating.

ASHMONT PLAYGROUND.

Brent street, near Talbot avenue.

(2.2 Acres.)

This playground, planted around with trees, and equipped for flooding for skating in winter and for ball playing in summer, is much used. Shelter and locker accommodations are needed.

In the execution of the work of the department it is with pleasure that I testify to the loyal and efficient support I have received from Charles E. Putnam, engineer, and from Messrs. James B. Shea, John W. Duncan and Ralph R. Curtis, assistant superintendents.

Respectfully submitted,

JOHN A. PETTIGREW,

Superintendent.

REPORT OF THE COMMITTEE IN CHARGE OF
THE WOMEN'S AND CHILDREN'S DIVISION AT
CHARLESBANK.

To the Honorable Board of Park Commissioners:

GENTLEMEN:—Any report of the work at Charlesbank during the past year must bear a strong similarity to any record of the last two or three years, for the difference lies not so much in the kind of work done as in the nationality of the women and children who come to the Lodge, the green and the outdoor gymnasium. Ten years ago the gymnasts were usually big girls and young unmarried women. To-day they are children,—and the difference in amount of gymnastic work pursued is explainable by the earlier marriages of the southern races who come to this country as compared with the more native born who used to frequent the gymnasium. It follows naturally again that the number of babies to be seen at Charlesbank has greatly increased, and fortunate is it for the future health of those babies that they can lie around on the green or sleep in their baby carriages under the trees.

A difference is to be seen also in the “occupations” followed. There is now less desire among the children to read; even the fun of cutting out pictures has its limitations, though, when cut, pasting them onto blank paper for home ornament is always permissible. It is *dramatics* that have taken the place of former staid enjoyments. The rapid improvised adaptation by the foreign-born children of stories they hear or read is remarkable, as they create the “scenario” of a story out of a ragged curtain, tissue paper dresses and broken dolls, cups and toys. Dramatics on the green in summer and dramatics in the Lodge in winter.

Dancing to the music of a hurdy-gurdy, however, holds an equal charm with dramatics and is now a part of the regular summer enjoyment. Croquet is another delight, superior to swinging and never wearisome, though it always needs instruction in how to behave as well as in how to play. In the gymnasium proper class and free hand work are in perpetual evidence and are skillfully performed. Baths have

greatly increased in number as children have learnt to take off their hair ribbons in making ready for spray baths.

The summer attendance averages about the same each year only it is never less, just a little more. In winter the evening classes increase in attendance (forty to fifty) until the approach of Christmas when the girls are busier in the stores. After the holidays the number remains steady at about thirty. Those who come are young women of bright intelligence and good manners, with an earnest desire for physical improvement.

The doings of the children, every afternoon and all day on Saturdays, abound in amusing and pathetic incidents such as arise everywhere, woven out of their experience in games, swings, books and dramatics.

The peculiar excellence of Charlesbank consists in its being an all-the-year-round home for children and women, independent of their own houses or tenements, where not under school discipline they are yet expected to be well mannered, clean and truthful; and they succeed fairly well by continuous effort.

They all are attached to the superintendent, Miss Ann I. Loftus, who is often a welcome guest in their homes, thus strengthening the influence she has gained over them in the Lodge and gymnasium. Miss Quinlan, the assistant summer superintendent, has a special knack in playing games with the children and in obtaining good gymnastic work from them. The committee of ladies still continues to find ever fresh interest in supervising Charlesbank, for there is no end to the minor improvements and little kindnesses which it is within their scope to enforce.

KATE GANNETT WELLS,
ANNA PHILLIPS WILLIAMS,
Committee.

General Exhibit of Appropriations, 1908-09.

OBJECT OF APPROPRIATION.	Balances, January 31, 1908.	Appropriations and Transfers, 1908-09.	Total Credits.	Expenditures, 1908-09.	Balances, January 31, 1909.
Park Department, maintenance.....	.....	*\$309,640 34	\$309,640 34	\$309,008 32	†\$632 02
Marine Park, pier head.....	\$2,490 19	.....	2,490 19	822 91	1,667 28
Castle Island, sanitary and shelter.....	708 15	.....	708 15	662 66	45 49
Charlesbank, addition to building and shower baths.....	5,000 00	.....	5,000 00	.....	5,000 00
Charlestown Playground, gymnastic apparatus.....	2,983 75	.....	2,983 75	2,424 34	559 41
Franklin Field, speedway.....	2,848 20	.....	2,848 20	2,352 24	495 96
Franklin Field, locker buildings.....	21,298 60	.....	21,298 60	21,298 60	.....
North Brighton Playground, gymnastic apparatus.....	5,674 82	.....	5,674 82	5,674 82	.....
First Street Playground, gymnastic apparatus, etc.....	4,040 24	.....	4,040 24	2,236 15	1,804 09
Fellows Street Playground, handball court.....	482 23	.....	482 23	.....	482 23
Savin Hill Playground, grading and improvements.....	5,000 00	.....	5,000 00	5,000 00	.....
Playground, Wards 7 and 9.....	17,349 55	.....	17,349 55	456 93	.....
Playground, Ward 9, bleachers.....	426 59	.....	426 59	.....	16,892 62
Marcella Street Playground, gymnastic apparatus, etc.....	4,500 00	.....	4,500 00	499 22	426 59
Ward 22 Playground.....	1,699 20	.....	1,699 20	1,699 20	4,000 78
Commonwealth Playground.....	2,192 12	.....	2,192 12	.....	2,192 12
Cottage Street Playground, gymnastic apparatus, lockers, etc.....	5,000 00	.....	5,000 00	4,307 97	692 03
Playground, Orient Heights.....	30,000 00	.....	30,000 00	.....	30,000 00
Playground, Parker Hill.....	60,000 00	.....	60,000 00	.....	60,000 00
Playgrounds, Ward 13.....	25,000 00	.....	25,000 00	.....	25,000 00
Playground, Ward 17.....	80,000 00	.....	80,000 00	.....	80,000 00
Savin Hill Park.....	35,000 00	.....	35,000 00	.....	35,000 00
	\$311,693 64	\$309,640 34	\$621,333 98	\$356,443 36	\$264,890 62

* Collections on account of labor credited to appropriation, \$9,640.34.

† Balance merged at end of financial year.

Expenditures on Account of Land and Construction from February 1, 1908, to January 31, 1909.

	Drainage.	Grading.	Water Supply.	Buildings.	Gymnasium Apparatus and Fences.	Filling.	Grand Stand.	Totals.
Marine Park.....	.....	.....	.....	\$822 91	.....	.....	.....	\$822 91
Castle Island.....	.....	.....	.....	662 66	.....	.....	.....	662 66
Charlestown Playground.....	.....	.....	\$410 97	.....	\$2,013 37	.....	.....	2,424 34
Franklin Field.....	.....	.....	.....	21,298 60	.....	.....	.....	21,298 60
Speedway, Franklin Field.....	\$229 77	\$478 23	.....	.....	25 50	.....	\$1,618 74	2,352 24
North Brighton Playground.....	858 03	16 75	.....	4,800 04	.....	.....	.....	5,674 82
First Street Playground.....	.....	.....	.....	1,158 52	1,077 63	.....	.....	2,236 15
Marcella Street Playground.....	106 75	.....	.....	2,091 67	.....	.....	.....	2,198 42
Randolph Street Playground.....	.....	.....	.....	.....	456 93	.....	.....	456 93
Cottage Street Playground.....	.....	.....	.....	4,304 47	3 50	.....	.....	4,307 97
Savin Hill Playground.....	325 17	1,691 76	131 54	158 50	.....	\$2,693 03	.....	5,000 00
Totals.....	\$1,519 72	\$2,186 74	\$542 51	\$35,298 07	\$3,576 93	\$2,693 03	\$1,618 74	\$47,435 04

Expenditures on Account of Maintenance from

PARKS.	Roads.	Walks.	Grounds.	Buildings.
Commonwealth avenue.....	\$33,714 53	\$1,996 36	\$3,213 64	.....
The Fens.....	4,657 23	660 86	6,647 35	\$697 36
Riverway.....	3,958 98	281 36	3,552 95	1,551 97
Olmsted Park.....	4,967 75	649 92	8,684 42	2,220 40
Arborway.....	3,739 66	88 35	5,751 53	.....
Arnold Arboretum.....	2,076 16	326 80	.....	430 97
West Roxbury Parkway.....	.....	.....	929 29	47 12
Franklin Park.....	2,572 03	2,378 70	21,792 03	9,436 22
Columbia road.....	3,551 12	90 58	397 14	.....
Strandway.....	2,523 42	131 63	5,061 91	1,699 81
Marine Park.....	882 06	1,223 16	5,557 74	1,562 05
Wood Island Park.....	249 76	199 65	2,511 95	896 98
Charlesbank.....	.....	119 16	3,662 00	.....
Trinity Triangle.....	.....	4 50	.....	.....
Charlestown Heights.....	.....	317 04	1,698 57	722 53
Charlestown Playground.....	.....	74 18	727 23	.....
Dorchester Park.....	.....	.....	1,358 09	32 25
Franklin Field.....	454 69	.....	2,777 63	4,638 02
Copp's Hill terraces.....	.....	6 00	554 41	.....
Chestnut Hill Park.....	1,280 28	78 09	2,803 05	10 70
North Brighton Playground.....	.....	18 87	634 09	2,423 47
Neponset Playground.....	.....	10 00	563 24	75 69
Billings Field.....	.....	.....	397 59	.....
First Street Playground.....	.....	6 74	727 04	1,277 10
Prince Street Playground.....	.....	.....	555 86	.....
Mystic Playground.....	.....	31 50	613 67	.....
Fellows Street Playground.....	.....	29 13	470 75	.....
Christopher Gibson Playground.....	.....	.....	463 17	298 54
Columbus Avenue Playground.....	.....	18 85	914 82	268 31
Ashmont Playground.....	.....	.....	348 94	.....
Savin Hill Playground.....	.....	.....	279 65	208 94
Roslindale Playground.....	.....	.....	340 07	.....
Forest Hills Playground.....	.....	.....	433 37	.....
Rogers Park.....	.....	24 49	498 72	.....
Berners square.....	.....	.....	2 10	.....
Cottage Street Playground, Ward 2.....	.....	4 50	502 72	421 66
Randolph Street Playground.....	.....	4 50	722 58	535 88
Marcella Street Playground.....	.....	23 28	1,248 11	798 73
Commonwealth Park.....	.....	4 50	362 72	23 25
Office expense.....	.....	.....	.....	.....
Miscellaneous.....	.....	.....	.....	.....
Moths.....	.....	.....	.....	.....
	\$64,627 67	\$8,802 70	\$87,760 14	\$30,277 95

February 1, 1908, to January 31, 1909.

General.	Drainage.	Walls.	Sheep and Water Fowl.	Skating and Other Sports.	Men's Gym- nasium.	Women's and Children's Gym- nasium.	Office Expense and Moths.	Totals.
\$11,834 41								\$50,758 94
4,094 08	\$383 32		\$419 14	\$2 11				17,561 45
2,841 58								12,186 84
5,284 94			419 64	442 56				22,669 63
2,912 18								12,491 72
930 62		\$227 32						3,991 87
296 82								1,273 23
12,574 14	230 47		1,802 93	3,149 93				53,936 45
1,227 90								5,266 74
3,107 01				707 79		\$94 25		13,325 82
2,810 81	5 45			14 00				12,055 27
2,257 87				330 21	\$3,237 02			9,683 44
3,356 21				64 10	4,099 06	3,094 26		14,394 79
								4 50
838 12				17 20				3,593 46
370 86				259 43	77 87	79 58		1,589 15
462 83				130 50				1,983 67
3,004 67			786 09	1,225 74				12,886 84
170 86								731 27
1,284 37				51 15				5,507 64
1,203 23	126 03			389 84		364 07		5,159 60
352 97				300 99		209 54		1,512 43
192 20				233 03				822 82
768 66				409 87	106 12			3,295 53
266 47						319 05		1,141 38
341 35				106 85		369 22		1,462 59
241 88						394 14		1,035 90
361 94				200 00		227 25		1,550 90
448 06				80 70		189 57		1,920 31
165 29				193 16				707 39
496 00				1,141 35				2,125 94
165 30				208 62				713 99
139 25				23 06				595 68
198 67				128 67				850 55
								2 10
373 47				298 01				1,600 36
761 44				439 19		800 96		3,264 55
685 16				182 06				2,937 34
219 72				330 65				940 84
							\$8,262 53	8,262 53
							2,120 26	2,120 26
							11,092 61	11,092 61
\$67,041 34	\$745 27	\$227 32	\$3,427 80	\$11,060 77	\$7,520 07	\$6,141 89	\$21,475 40	\$309,008 32

INCOME.

RECEIPTS.

Balance from last year	\$178 70
Received for labor	9,466 14
Received from sale of buildings, wool, sheep, grass, wood, etc.	902 47
Rents	2,037 92
	<u>\$12,585 23</u>

PAYMENTS.

Appropriation Park Department	\$9,640 34
Income carried to General City Income	2,944 89
	<u>\$12,585 23</u>

Park Betterments Collected by City Collector to January 31, 1909.

	Assessments Committed to Collector.	Abated.	Net Assess- ments.	Collected.	Outstand- ing Jan. 31, 1909.
Public Park, Back Bay.	\$434,600 00	\$144,195 73	\$290,404 27	\$290,404 27	
Marine Park.	23,543 00	12,616 80	10,926 20	10,926 20	
Franklin Park.	135,029 00	122,000 66	13,028 34	13,028 34	
Parkway, Old Harbor.	60,789 00	50,426 00	10,363 00	8,256 00	\$2,107 00
“ Muddy River, ...	108,972 00	83,594 25	25,377 75	23,238 75	2,139 00
“ West Roxbury, ...	154,107 00	113,658 00	40,449 00	31,763 00	8,868 00
“ Dorchester.	9,713 00	3,055 54	6,657 46	5,927 74	729 72
	<u>\$926,753 00</u>	<u>\$529,546 98</u>	<u>\$397,206 02</u>	<u>\$383,544 30</u>	<u>\$13,661 72</u>

Public Park and Playground Debt.

Liabilities.

Total loans outstanding January 31, 1909 \$16,333,910 98

Resources.

Sinking Fund, January 31, 1909 7,182,629 10

Net Debt, January 31, 1909 \$9,151,281 88

Park Statistics to January 31, 1909.

PARKS.	Year of Purchase or Taking.	COST TO DATE.		Area.	Length of Drive-ways.	Length of Walks.	Length of Rides.	Area of Ponds and Rivers.
		Land.	Construction.						Total.
MAIN PARK SYSTEM.								
Commonwealth avenue...	1894-1905	.....	\$121,607 93	112.7 acres	12.1 miles	11.9 miles		
Fens.....	1877-1879	\$596,254 49	2,150,875 44	115 "	4 "	6.7 "	1.1 miles	22 acres
* Riverway.....	1890	457,457 53	674,109 35	40 "	1.4 "	2.8 "	1.2 "	8 "
† Olmsted Park.....	1890 and 1892	1,081,947 60	734,373 59	180 "	2.7 "	5.8 "	1.6 "	77 "
Arborway.....	1892	245,584 25	381,793 81	36 "	3.4 "	3.2 "	1.4 "	
Arnold Arboretum.....	1882 and 1895	79,354 15	388,372 84	223 "	3.4 "	5.65 "	.....	0.6 acre
West Roxbury Parkway...	1894	135,265 29	22,123 21	150 "	2.8 "	4.3 "	2.4 "	
Franklin Park.....	1883 and 1884	1,551,896 63	2,428,919 40	527 "	7.3 "	14.9 "	1 mile	7.4 acres
MARINE PARK SYSTEM:								
Columbia road.....	1899	447,528 63	540,511 93	{102.5 " land 194 " flats}	4.2 "	4.5 "		
Dorchesterway.....	1892	63,735 54	65,187 12					
Strandway.....	{1890, 1892, 1897 and 1901 }	772,515 12	390,558 96	{52.5 " land 4.9 " flats}	0.5 mile	1.3 "	.....	3.4 "
Marine Park.....	1883	232,972 57	1,059,306 17					
Carried forward.....	.....	\$5,664,511 80	\$8,957,739 75	1,737.60 acres	41.80 miles	61.05 miles	8.7 miles	118.4 acres

Park Statistics to January 31, 1909.—Continued.

PARKS.	Year of Purchase or Taking.	COST TO DATE.			Area.	Length of Drive-ways.	Length of Walks.	Length of Rides.	Area of Ponds and Rivers.
		Land.	Construction.	Total.					
<i>Brought forward</i>.....	.....	\$5,664,511 80	\$8,957,739 75	\$14,622,251 55	1,737.60 acres	41.80 miles	61.05 miles	8.7 miles	118.4 acres
‡ Castle Island.....	1890	.....	35,640 06	35,640 06	{ 25.7 acres land 78.3 " flats	} 0.3 mile	2.1 "		
WOOD ISLAND PARK.....	1882 and 1891	132,800 00	259,273 53	392,073 53	{ 55.6 " land 155.4 " flats				
CHARLESBANK.....	1883	373,916 99	313,448 13	687,365 12	10 acres				
TRINITY TRIANGLE.....	1885	30,000 00	.....	30,000 00	0.12 acre	.....	1.5 "		
CHARLESTOWN HEIGHTS.....	1891	50,538 02	103,107 56	153,645 58	{ 6.1 acres land 4.3 " flats	.....	0.4 mile		
CHARLESTOWN PLAYGROUND,	1891	172,923 31	25,332 60	198,255 91	{ 14 " land 4 " flats	.....	0.6 "		
DORCHESTER PARK.....	1891 and 1903	64,165 37	13,561 18	77,726 55	26 "				
FRANKLIN FIELD.....	1892	157,341 22	149,201 94	306,543 16	77 "	0.35 mile	0.35 "		
NORTH END BEACH.....	1893	328,364 44	169,262 27	497,626 71	{ 3.7 " land 3 " flats	.....			
COPP'S HILL TERRACES.....	1893	90,858 19	32,001 46	122,859 65	0.6 acre	.....	0.11 "		
§ CHESTNUT HILL PARK....	{ 1898, 1899 } { and 1902 }	210,239 06	6,940 60	217,179 66	55.4 acres	1.4 miles			
NORTH BRIGHTON PLAY- GROUND.....	1894	22,107 12	22,602 77	44,709 89	14 "				
NEPONSET PLAYGROUND....	1896	24,804 39	16,189 35	40,993 74	18 "				
BILLINGS FIELD.....	1896	47,068 98	16,758 00	63,826 98	11 "				
|| FIRST STREET PLAYGROUND	1897	.....	29,036 31	29,036 31	4.6 "	.....	0.4 "		
¶ FREEPORT STREET TRI- ANGLE.....	1897	4,000 00	.....	4,000 00	0.14-acre				
<i>Carried forward</i>.....	.....	\$7,373,638 89	\$10,150,095 51	\$17,523,734 40	2,304.56 acres	43.85 miles	66.51 miles	8.7 miles	118.4 acres

Park Statistics to January 31, 1909.—Continued.

PARKS.	Year of Purchase or Taking.	COST TO DATE.		Area.	Length of Drive- ways.	Length of Walks.	Length of Rides.	Area of Ponds and Rivers.
		Land.	Construction.					
<i>Brought forward</i>.....	.....	\$7,373,638 89	\$10,150,095 51	2,304.56 acres	43.85 miles	66.51 miles	8.7 miles	118.4 acres
PRINCE STREET PLAY- GROUND.....	{1897, 1899} {and 1901}	180,474 70	434 07	0.4 acre				
MYSTIC PLAYGROUND.....	1897	50,125 00	3,804 41	2.3 acres				
FELLOWS STREET PLAY- GROUND.....	1897	14,503 72	7,032 64	0.85 acre				
CHRISTOPHER GIBSON PLAY- GROUND.....	1897	37,709 58	10,042 75	5.8 acres				
COLUMBUS AVENUE PLAY- GROUND.....	{1899, 1900} {1901, 1902}	327,503 84	18,581 26	5 "				
ASHMONT PLAYGROUND.....	1899	43,990 09	4,000 00	2.2 "				
SAVIN HILL PLAYGROUND....	1899	27,147 30	11,129 36	{ 6.9 acres land 11.7 " flats				
ROSLINDALE PLAYGROUND...	1899	24,825 11	5,992 71	3.7 "				
FOREST HILLS PLAYGROUND.	1902	25,166 75	.....	9.6 "				
COTTAGE STREET PLAY- GROUND, WARD 2.....	1902	47,002 32	7,305 65	3.85 "				
RANDOLPH STREET PLAY- GROUND.....	1903	256,440 63	27,241 16	2.8 "				
MARCELLA STREET PLAY- GROUND.....	1903	.....	31,154 50	5.1 "				
2 ROGERS PARK.....	1899	30,000 00	3,853 11	6.9 "				
<i>Carried forward</i>.....	.....	\$8,438,527 93	\$10,280,667 13	2,371.66 acres	43.85 miles	66.51 miles	8.7 miles	118.4 acres

Park Statistics to January 31, 1909.—Concluded.

PARKS.	Year of Purchase or Taking.	COST TO DATE.		Area.	Length of Drive-ways.	Length of Walks.	Length of Rides.	Area of Ponds and Rivers.
		Land.	Construction.					
<i>Brought forward</i>		\$8,438,527 93	\$10,280,667 13	2,371.66 acres	43.85 miles	66.51 miles	8.7 miles	118.4 acres
³ BERNERS SQUARE.....	1901	.....	294 70	1.2 "				
⁴ OAK SQUARE.....	1902	.....	682 34	0.22 acre				
⁵ COMMONWEALTH PLAY- GROUND.....	1905	.....	7,807 88	8.07 acres				
PLAYGROUNDS, INVESTIGAT- ING SITES.....		245 29	.....					
General account.....		\$8,438,773 22	\$10,289,452 05					
Park Nursery.....		.....	73,987 50					
Betterment expenses.....		.....	29,947 07					
		.....	13,356 10					
		\$8,438,773 22	\$10,406,742 72	2,381.15 acres	43.85 miles	66.51 miles	8.7 miles	118.4 acres

* An additional area of 16½ acres is within the limits of the town of Brookline.
† An additional area of 18 acres is within the limits of the town of Brookline.
‡ Custody given to city by Act of Congress.
§ 49 acres transferred from Water Department; an additional area of 160.65 acres, including water area of 122.70 acres, is under the control of the Metropolitan Water and Sewerage Board.
|| Transferred from, and \$454.15 expended by, the Public Grounds Department.
¶ Transferred to Street Department.
1 25,470 square feet transferred from, and \$2,000 expended by, the Public Grounds Department.
2 Transferred from, and \$30,000 expended for land by, the Public Grounds Department.
3 Originally dedicated for a square by David Sears and released to the city by his heirs.
4 Transferred from School Department by order of the City Council. Approved March 24, 1902.
5 Custody given to city by Statutes 1891, chapter 421.
Of the above total lengths of driveways, walks and rides, there have been completed to date, respectively, 40.8 miles, 59.2 miles and 6.3 miles.





TWELFTH ANNUAL REPORT

FOR THE

BOSTON INFIRMARY DEPARTMENT

FOR THE YEAR ENDING JANUARY 31, 1909.

BOSTON INFIRMARY DEPARTMENT,*
28 COURT SQUARE, BOSTON, January 31, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,—In accordance with the provisions of chapter 3, section 24, of the Revised Ordinances, the Boston Infirmary Trustees respectfully submit the report of the Boston Infirmary Department for the year ending January 31, 1909.

ORGANIZATION.

The Board remains constituted the same as last year with the exception that Dr. Nathaniel W. Emerson has been appointed to succeed Mr. William J. Sullivan. The Board organized in May, 1908, by the election of Mr. Edward M. Gallagher, chairman, and Miss Mary A. Dierkes, secretary.

DEPARTMENT APPROPRIATION.

The appropriation for the department for the year was \$215,000. To this amount was added \$195, which was received from the Commonwealth of Massachusetts for condemned cattle. The expenditures amounted to \$213,333.45 and a return of \$1,861.55 was made to the city treasury.

* Formerly known as the Pauper Institutions Department.

ALMSHOUSE AND HOSPITAL, LONG ISLAND.

On May 1, 1908, Dr. Charles E. Donlan was appointed Superintendent of the Boston Almshouse and Hospital, relieving Dr. George W. Holmes, who in addition to his duties as resident physician had the responsibility of the administration of the entire institution for two months as Acting Superintendent.

The appropriation for the Long Island Institution was \$150,195 (including the amount received for cattle). The expenditures amounted to \$145,379.56, leaving a balance of \$4,815.44, a portion of which was transferred to other appropriations of the department which showed a deficit.

The average daily population at Long Island has been as follows:

	1908-09.	1907-08.	1906-07.	1905-06.	1904-05.
Total inmates	872	791	800	857	829
In hospital	295	283	299	296	270

The per capita expense per week in the hospital has been \$4.98.

The per capita expense per week in the almshouse department has been \$2.30.

The per capita cost per week in the entire institution has been \$3.12.

Visiting Medical Staff.

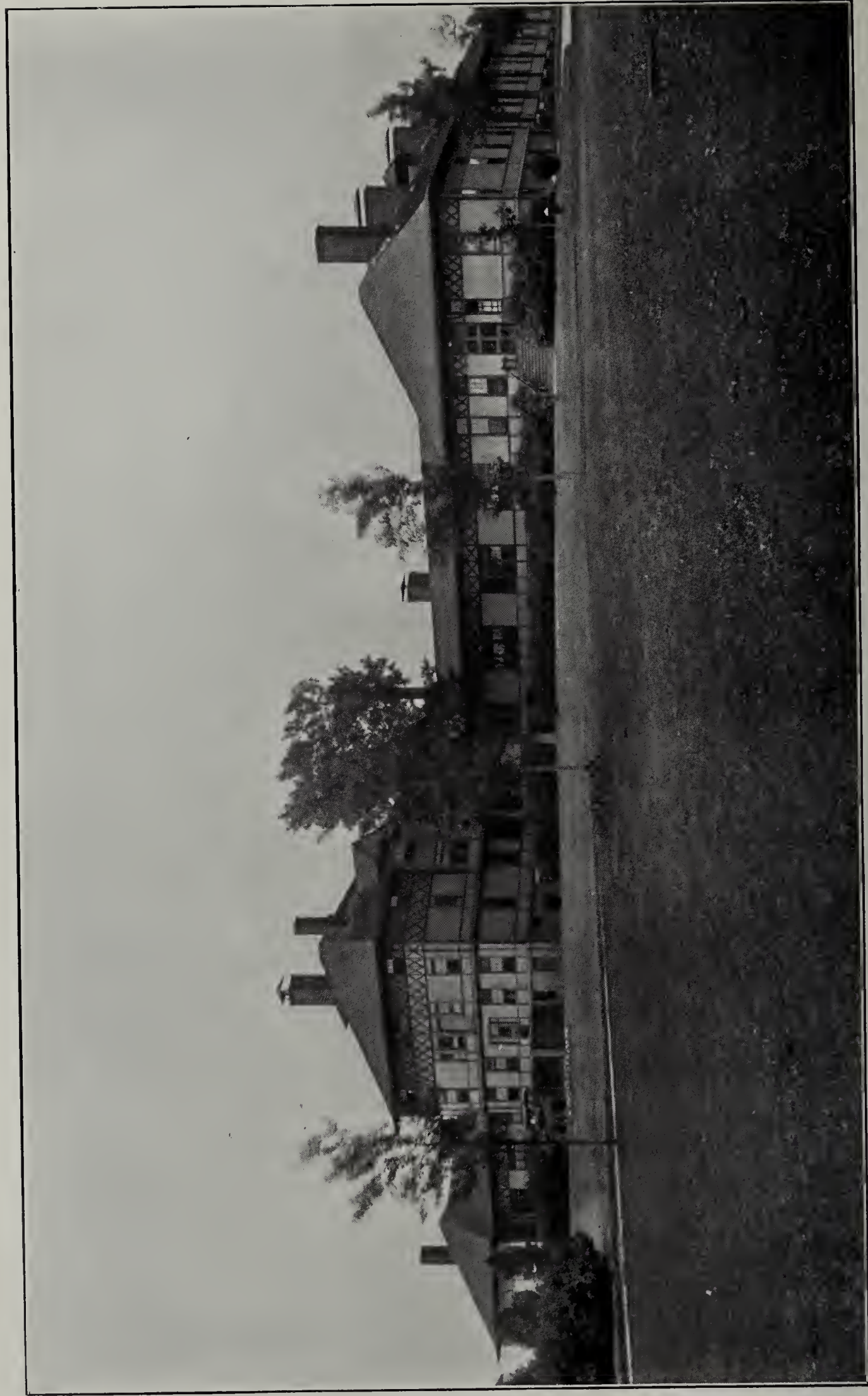
Resignations have been received from two members of the Visiting Medical Staff during the year, H. M. Swift, M. D., assistant visiting neurologist, and Richard Dexter, M. D., assistant visiting physician. The following appointments on the staff have been made: Harvey P. Towle, M. D., consulting dermatologist; Robert Soutter, M. D., visiting orthopedic surgeon; James R. Torbert, M. D., consulting obstetrician, and Gerald Blake, M. D., assistant visiting physician.

Employees.

On January 31, 1908, the full quota of employees (excluding six unpaid house officers) was 140, while to-day it is 122.

Rev. William B. Toulmin, who for seventeen years has ministered to the needs of the Long Island people as Chaplain, having resigned his position on account of illness, has been made Chaplain Emeritus, in recognition of his long and faithful service to the department. Rev. George E. Stokes, D. D., has been appointed as his successor.

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ADMINISTRATION BUILDING AND MAIN HOSPITAL.

Training School for Nurses.

On June 19 the graduation exercises of the Training School for Nurses were held in the chapel, and diplomas were awarded to fourteen nurses by his Honor Mayor Hibbard. Addresses were given by Hon. Michael J. Murray, Dr. E. W. Taylor, secretary of the Visiting Medical Staff, and the Chairman of the Board of Trustees.

Every effort is being made by the trustees to protect the nurses of the hospital from contracting tuberculosis. Each applicant for admission to the school is carefully examined on entrance for symptoms of tuberculosis, and those who show any symptoms of or tendency to this disease are rejected.

Repairs and Improvements.

A new 12-inch water main has been laid between Boston and Long Island by the Water Department, replacing a 6-inch main, thereby greatly improving the water supply at the institution.

Such repairs to the buildings as were consistent with means at hand have been made, the more important of which are enumerated in the Superintendent's report.

Steamer "John Howard."

The condition of the Steamer "John Howard" at the present time is such that it is practically beyond usefulness to the department. More has been expended on the boat during the past year for repairs than ever before (\$2,618.41), and no more money should be spent upon it.

Farm Products and Articles Manufactured in Sewing Room.

Farm products to the value of about \$11,000 were raised at Long Island, and material valued at \$3,355 has been made up into clothing and articles for household use.

CHARLESTOWN ALMSHOUSE.

The expenses at the Charlestown Almshouse have been kept within the appropriation of \$17,000, and yet various repairs have been made, as are indicated in the Superintendent's report. Farm products to a value of \$1,500 were raised.

IN GENERAL.

The Randidge Fund picnic excursions were held at Long Island during the summer months, as in the past, being in charge of the Penal Institutions Commissioner.

In August, through the courtesy of the Penal Institutions Commissioner, the inmates of the Long Island Institution were given an excursion about the harbor.

The Music Commissioners repeated this year the concert which for the past two years has been given at Long Island by the Municipal Band.

A portion of the piggery at Long Island was destroyed by fire on November 3, but no stock was lost.

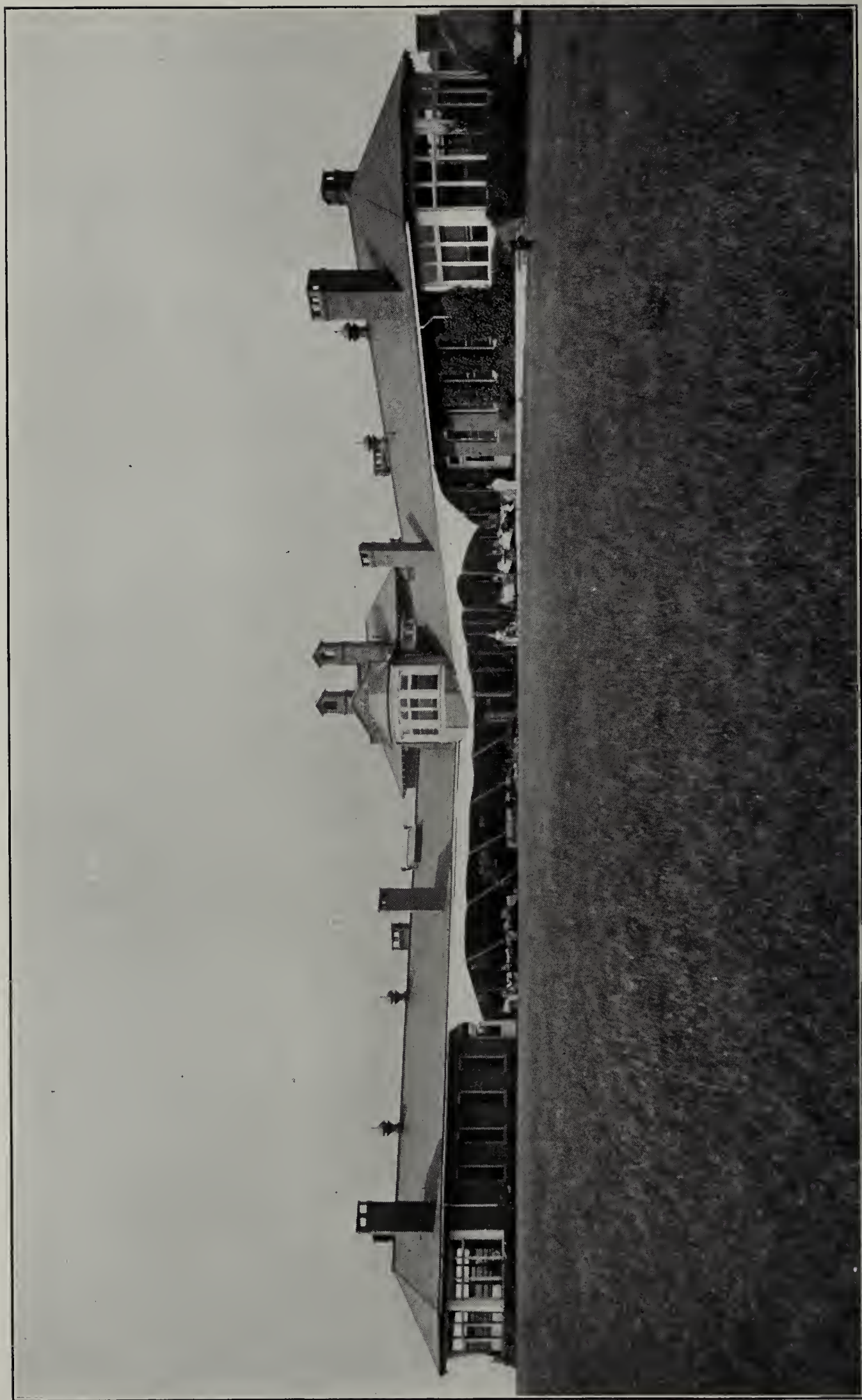
PAUPER EXPENSE ACCOUNT.

Under the provisions of chapter 629 of the Acts of 1908, on and after December 1, 1908, the expense of the support of public charges at the Massachusetts School for Feeble Minded, the Wrentham State School, the Massachusetts Hospital for Epileptics and similar institutions was assumed by the Commonwealth of Massachusetts. During the past year the City of Boston has paid \$25,390.37 for the support of adults at these institutions, an item which will not have to be provided for in the appropriation for the coming year, and for which no funds have been requested.

Owing to lack of funds, no applications for support at the Massachusetts State Sanatorium at Rutland have been accepted since August, 1908. The trustees anticipate that during the coming year the appropriation for the support of Rutland patients will be placed in the hands of the Consumptives' Hospital Department instead of with this department. This will leave to the care of the Boston Infirmary Department inebriates who are public charges at the Foxborough State Hospital or at insane hospitals, Boston cases at the State Hospital at Tewksbury, and occasional Boston cases in other cities and towns. These will be cared for under the Pauper Expense Account. The appropriation for the care of Epileptics, Inebriates and Feeble Minded has been discontinued.

The trustees believe that all phthisis patients should be under the care and supervision of the Consumptives' Hospital Department, and that eventually all such cases should be removed from the Long Island Hospital. Accommodations for consumptive patients are very limited, but for the present the Long Island Hospital will care for as many such patients as the accommodations will permit. For the past few months the number has reached seventy-five, in the male consumptive wards, whereas only sixty should be cared for in the accommodations provided, but the emergency had to be met and additional beds were crowded in. This action on the part of the trustees may be open to criticism, but there seemed to be no help for it as in many instances immediate relief was imperative.

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CONSUMPTIVES' HOSPITAL FOR MEN.

During the year the attention of the trustees was called to a fund in the hands of the Overseers of the Poor, known as the Jeffries Fund, which has been accumulating since 1786. The fund was originally left by David Jeffries, the "income to be applied to the purchase of tea, coffee, chocolate and sugar for the refreshment of those persons who, in the providence of God, are, or shall be, reduced and obliged to take shelter in the almshouse, after having lived respectably; the Overseers of the Poor to be judges as to the persons, but always giving preference to the pious poor." After taking up the matter with the Overseers of the Poor and the Law Department the trustees voted to relinquish any claim the department might have to this fund, which amounts to about \$9,500, as the inmates of the almshouse are at the present time supplied with tea, coffee and sugar, and much more good can be accomplished by the Overseers of the Poor in providing these supplies to the worthy poor in their homes.

By chapter 393 of the Acts of 1908, the name of the Pauper Institutions Department was changed to Boston Infirmary Department. This change was made without consulting this department and the trustees learned of it too late to protest the passage of the bill. The name chosen does not meet the requirements of the case and does not meet with the approval of the trustees. Simple courtesy would seem to demand that the trustees should be consulted in changing the name of the department.

Respectfully submitted,

EDWARD M. GALLAGHER,
MARY A. DIERKES,
THOMAS A. MCQUADE,
MAX E. WYZANSKI,
JANE S. ALEXANDER,
JAMES A. DORSEY,
NATHANIEL W. EMERSON.

REPORT OF THE SUPERINTENDENT OF THE
BOSTON ALMSHOUSE AND HOSPITAL,
LONG ISLAND.

LONG ISLAND HOSPITAL,
BOSTON HARBOR, MASS., January 31, 1909.

To the Boston Infirmary Trustees:

I have the honor to submit the following report on the Long Island Institutions for the year ending January 31, 1909, of which I have been the head since April 30, 1908, a period of nine months.

Data on the foregoing will be found in appended tables.

The total appropriation allowed Long Island for the year just closed was \$150,000. There was remaining of this at the time I assumed control of the institutions the sum of \$77,955.97, to cover the remaining seven months of the fiscal year.

Of this the sum of \$1,569.72 reverted to the general treasury of the city, and the sum of \$126.70 was used to cover the charges of the "Howard" exceeding its appropriation.

The sum of \$2,924.55 was used for your charges in state institutions.

The daily average population was 872, an increase of 81 over that of the previous year. Of this increase 15 per cent was hospital and 85 per cent almshouse.

The weekly per capita expense for the entire institution was \$3.21; the per capita expense in the hospital being \$4.98 and in the almshouse \$2.30.

Feeling that the appraisals in the past have not been graduated to parallel depreciation due to time and usage, I have placed a valuation in the present inventory that may appear strikingly lower.

The paid working force of the island I reduced in May by twelve men, all of whose services were superfluous.

The farm has been worked by a foreman and three paid assistants, with the addition of such of the inmates as were able to do a quota of work, and, for a few months, a small body of prisoners from Deer Island, who were brought over on the "Howard" and returned on the "Monitor" daily, and who were in no way allowed to come in contact with Long Island patients.

In November the piggery was partially destroyed by fire and will have to be rebuilt. Considering the relative unim-

portance of this appendage I should consider any large expenditure for its restoration unjustifiable.

To my mind the farm should be only an incidental adjunct to our institutions. While we shall continue to maintain it, if possible at a profit, its primary use must be to furnish employment for those who are able to work. In no case should the farm be permitted to take precedence over the welfare of the hospital.

Our buildings are all in good condition, but, of course, will require the annual minor improvements and repairs incident to wear and age.

The permanent improvements needed and most important are: a coal carrying system from the east wharf to the power house; a hospital wing composed of grated cubicles, the latter for a better care of the partially demented or observation cases, and the safety and comfort of other patients, and a new covering for the roof of the main hospital building to ensure greater safety from damage by fire.

I believe that a covering of metal or asbestos would be more effective than shingles or canvas, and the expense for either not materially greater.

The two 5-foot boilers in the power house are being removed and one 6-foot boiler substituted. When this is completed we shall have a good battery of five 150 horsepower boilers sufficient to care for all our present needs.

The new wharf with a breakwater, authorized by the loan bill of 1907, has been completed at a cost of \$15,639.41, and electric lighting has been extended to it so that a safe landing is available under all conditions on the west shore. The bank has been graded and a sea wall begun south of the wharf.

On the east side a surface drain was laid to prevent erosion of the bank from above, and with a minimum of expense the base can be protected from the sea, thus eliminating all danger to the adjacent dormitory.

I feel that the limit of the number of pupils in the training school for nurses should be increased by at least 25 per cent. In this event the enlargement of the nurses' home, which is even at this time too small, would be necessary, and I would further ask that the compensation of the head nurses be increased.

The natural physical features of the island, together with its present equipment of buildings and appointments, make it possible as the ideal chronic hospital allowing for an ever increasing population, sorted with discrimination.

It is in no particular disparagement of the Visiting Medical Staff that I strongly suggest that it devote a more frequent

and constant attention to our hospital. A service which is generously voluntary should be regarded in no degree as less obligatory.

It is proper for me to say that some members of the Visiting Staff have been indefatigable in attention to their duties, and I have no doubt others have been absent for cause. If any of the latter are incapacitated by age, pressure of business interests or other causes and are unable to attend to their duties here I suggest that we make them honorary members of the staff and substitute active workers.

We are now crowded in all departments, instanced typically in the so-called "new hospital," used solely for male phthisical patients, a department planned for fifty-two beds, gradually crowded until it contains seventy-five.

With reference especially to tuberculosis I would say that we will, and ought to, maintain a sub-division solely as a consumptive department in connection with our hospital, that is, for those cases which admitted primarily for some other cause develop active tuberculosis while here. But we should insist that the term "pauper consumptive" be eliminated as a name and a factor before admittance.

As for the crowding, general in all departments, it must be prevented by refusal on the part of the admitting power or it will be overcome by elimination on the part of the Superintendent.

Conditions at the Long Island institutions are now as perfect as exigencies and the normal changes of natural conditions permit. The chaplains, resident physician, the house staff and every subordinate officer conspicuous enough to come constantly under the personal observation of the Superintendent, are all rendering intelligent and painstaking service.

The position of chaplain emeritus was created for Rev. William B. Toulmin, who wished to retire on account of ill health, after long service.

Long Island, which at the present time is the superior of any institution of its kind in the United States, has suffered heretofore under an undeserved stigma that was made possible through the energies and influence of two classes of persons, with which Boston more than any city of this country is cursed, the imitative or theoretical philanthropist and the selfish politician. These two types working along opposite lines, with entirely different view points and motives, arrive at the one disastrous end, the destruction of discipline, harmony and success in public institutions of this character.

A serious abuse to which this and similar institutions is subjected is that of a court allowing persons brought before

it to evade commitment to a penal institution or workhouse, if the arraigned voluntarily immure themselves here for a stated period. This is neither more or less than a commitment by the court and is an intolerable condition.

This entire institution is and must be considered one large chronic hospital for indigents, and our present capacity of about one thousand beds allows for only legitimate cases.

The ideal system would call for a workhouse, that workhouse to be in no wise connected with a hospital for indigents. Those applying for admission to our hospital, who are not sick and are merely retiring here as a temporary refuge, should be sent to that workhouse as vagrants.

In short, a law should make such persons vagrants, *per se*, after a defined number of voluntary commitments as paupers, and those cases, which after their stay here become well enough to work but prefer to remain with us rather than be thrown on their own resources in the city, should be transferred to such workhouse.

I feel you will accomplish a great good in taking the initiative in obtaining legislation along this line.

Finally, I want to say that we are not parsimonious, and do not assume that we are even economical, but hope to arrive at a system of sane expenditure with lavishness and waste eliminated.

One difficulty, hard to surmount, is to teach the medical mind the difference between an acute and a chronic hospital; allowing that expenditures for medical record purposes are justified in the former, while the latter must be administered on a common sense basis.

Respectfully,

CHARLES E. DONLAN, M. D.,
Superintendent.

REPORT OF THE SUPERINTENDENT OF THE
ALMSHOUSE, CHARLESTOWN.

CHARLESTOWN DISTRICT,
BOSTON, MASS., January 31, 1909.

To the Boston Infirmary Trustees:

The annual report of the Charlestown Almshouse for the year ending January 31, 1909, is herewith submitted.

During the year there has been less sickness than in previous years and it is pleasing to note that the inmates are as happy and contented as it would be possible to find in any similar institution. The food served is of good quality and I believe has done much to maintain the high average of general good health that has prevailed. The entertaining of the people in my charge has been most generously cared for by church societies and individuals.

Much was accomplished in the way of repairs on the buildings and grounds. A new sea-wall has been constructed at the northwest portion of the grounds, and a vegetable cellar built, the work being done by inmates; the heating and power apparatus has been greatly improved by extensive repairs and new floors have been laid in some of the rooms. Of course these repairs contribute to the comfort of the inmates and officers, and further increase the efficiency of the institution.

The farm, although covering little territory, has supplied us with vegetables in quantity and excellent in quality and has been a source of pride to the inmates, who do the farm work under the supervision of the institution farm officer.

I desire to express my gratitude to the Board of Trustees who have so generously supported me, and to thank the officers of the institution for the assistance received on innumerable occasions. To the clergy who have attended to the religious welfare of the inmates, to the good people who have so generously donated books and to those who have given valuable time to entertain the inmates, I extend my sincere thanks.

Respectfully yours,

MARY A. MORRIS,
Superintendent.

REPORT OF THE VISITING MEDICAL STAFF OF THE
LONG ISLAND HOSPITAL.

BOSTON, January 31, 1909.*To the Boston Infirmary Trustees:*

The past year has still further confirmed our frequently expressed opinion that the Long Island institution is to be regarded primarily as a hospital for chronic disease. Although many of its inmates may not be easy to classify in any distinct category of disease, the fact remains that almost without exception they are infirm and in general so far below average efficiency that they are properly classified in the general category of the sick. As the condition of the inmates at Long Island comes to be more completely understood, we believe that the demand will become increasingly insistent to remove the declaration of pauperism from many of those seeking admission to the hospital. The stigma which this declaration entails is a manifest injustice to the chronic sick, a fact which should be continually borne in mind by those in authority until some rational means of amending the law is secured. As we have often said before in these reports, the chronic sick demand and are worthy of the same care and attention as that bestowed upon the acute sick. The development of the hospital idea at Long Island has done much toward accomplishing this result so far as that institution is concerned. It may now with justice be said that the inmates of the Long Island hospital are receiving wholly adequate medical and surgical care, thanks to the enthusiasm and efficiency of the resident medical staff under the direction of the Superintendent.

The hospital buildings at the present time are much overcrowded. Upwards of 300 patients are being cared for, which strains the capacity of the wards and increases very materially the work of the nurses. While it is fully recognized that the over-crowding of institutions in communities of increasing population is inevitable, we are strongly of the opinion that in a hospital of this character which is granted small privileges in the way of refusing to accept patients, adequate provision against over-crowding should be made. We have on various occasions discussed the question of tuberculosis as

related to this institution. While it is altogether undesirable that patients suffering from this disease should be sent there who may be treated elsewhere, the hospital must accept and care for a certain number of consumptives, for which provision has been made. To over-crowd the hospital, however, with this class of patients is to be deprecated.

We have also from time to time called attention to the possibility of establishing so-called infirmary wards at the men's dormitory and in the women's building, and have pointed out that such wards would serve the double purpose of providing accommodations for persons not seriously ill and of preventing an unnecessary over-crowding of the hospital wards. It is our belief that such wards could be established without undue expense and that they would prove a valuable aid to a more adequate classification of the inmates. The opening of such wards would make necessary a certain increase in the size of the training school for nurses. Even as at present organized the number of nurses is insufficient to meet the full demands of the situation. The peculiar difficulties in the nursing of chronic patients of the type often met at Long Island are such that an adequate number should be supplied if the training school is to retain its popularity and increase its general usefulness.

There have been no changes in the resident medical staff during the past year, except such as naturally result from the graduation of house officers and the appointment of new ones. There are now six house officers, a number which apparently meets the present needs of the medical service. It is desirable that more bacteriological work be done at the hospital in connection with patients, and to this end we suggest that apparatus be provided as the occasion demands. The resident physician, Dr. George W. Holmes, has proved an admirable executive and medical officer. He has demonstrated the possibility of maintaining a general oversight over the work of the entire hospital without interference with the rights and privileges of the house officers. The satisfactory progress of the past year on the medical side has been largely due to his tact and judgment.

Several resignations and appointments on the Visiting Staff have been made during the year. Dr. Richard Dexter, assistant visiting physician, resigned to accept a flattering position in Cleveland, Ohio. His place has been filled by the appointment of Dr. Gerald Blake. Dr. Robert Soutter has been appointed visiting orthopedic surgeon to the hospital, Dr. E. H. Bradford retaining his position as consulting orthopedic surgeon.

It is again a gratification to express our appreciation of the consistent effort of your Board and of the Superintendent of the Hospital toward improving medical conditions and toward recognizing the fact that Long Island as a hospital must not be subordinated to Long Island as an almshouse.

Respectfully submitted,

E. W. TAYLOR, *Secretary.*
For the Visiting Staff.

REPORT OF THE VISITING PHYSICIAN OF THE
ALMSHOUSE, CHARLESTOWN.

CHARLESTOWN, MASS., January 31, 1909.

Miss MARY A. MORRIS,

Superintendent Charlestown Almshouse, Charlestown, Mass.:

I hereby respectfully submit my report for the year ending January 31, 1909.

The hospital cases this past year have fortunately been fewer than usual. The dispensary cases have been as numerous as in past years.

The custom of bringing all cases, no matter how trivial, to my attention has still prevailed.

We have lost three inmates by death, all women. One died of sclerosis of the heart, age 88. Another died of acute gastro-enteritis complicated with chronic endocarditis, age 55. The third died suddenly of chronic myocarditis, age 67.

Nine inmates were transferred to Long Island. One inmate was committed for special mental treatment.

Again I wish to thank you and the matrons of the medical department for your interest and excellent aid in taking care of the sick.

Yours very truly,

JOSEPH E. McDERMOTT M. D.



NURSES' HOME.

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

LONG ISLAND HOSPITAL TRAINING SCHOOL FOR NURSES.

This training school is established to give a systematic two years' course of training and practice to women desirous of becoming professional nurses.

The school is connected with the Boston Almshouse and Hospital on Long Island, in Boston Harbor. The hospital buildings are modern in all their appointments, and contain three hundred beds.

The superintendent of the almshouse and hospital has the general supervision of all matters relating to the school, and application for admission should be made to him. The superintendent of nurses has the immediate charge of all the nursing in the hospital, of all persons employed in the wards, and also is responsible for the instruction and management of the pupils in the training school.

The course of training requires two years, and includes general medical, surgical, maternity and infant nursing.

A fixed course of instruction is given, including lectures and demonstrations on practical points by the Medical and Surgical Staff, recitations on these and from text books, but chiefly the daily instruction from the superintendent of nurses and the graduate head nurses and the accurate daily drill in the wards and operating room. The instruction includes the general care of the sick and the usual detailed instruction common to all hospital training schools. Maternity nursing is taught by practice in the confinement rooms, which includes digital examination of patients.

Candidates will be received between the ages of twenty-one and thirty years. They must be of sound health. They should send a brief personal history, and give the names and addresses of responsible persons, not of their own kin, who know their good character and capabilities. Upon the approved recommendation of the superintendent they will be received for four months on probation.

At the end of the four months, candidates, if considered satisfactory to the authorities in charge of the hospital, are permitted to join the school upon signing an agreement to complete the prescribed course of two years and to conform to all rules.

The right is reserved by the authorities of the hospital to terminate at any time the connection of any pupil for inefficiency, misconduct, generally unsatisfactory record, or for any other reason which may be deemed sufficient.

While the education and training which are afforded are intended to be a full equivalent for their services, there is given the pupils, toward defraying their necessary personal expenses, ten dollars per month during the first year and twelve dollars per month for the second year.

If pupils successfully fulfil the requirements for the full term of two years, and pass the necessary examinations, they will, upon the termination of their service, receive the diploma of the hospital.

There are no fixed dates for the beginning of service, but accepted candidates may enter whenever vacancies occur. Pupils are required after they join the school to wear the training school uniform and regulation shoes.

BOSTON ALMSHOUSE AND HOSPITAL.

GRADUATES OF THE TRAINING SCHOOL FOR NURSES DURING
THE YEAR FEBRUARY 1, 1908 — JANUARY 31, 1909.

Miss Anna F. Patten,
Miss Nellie V. Ryan,
Miss Catherine O'Toole,
Miss Mary B. MacFadyen,
Miss Agnes E. Nolan,
Miss Elizabeth Fitzgerald,
Miss Anna C. Madden,

Miss Annie M. Carnochan,
Miss Margaret McMillan,
Miss Anna M. Allan,
Miss Mary M. Cudire,
Mrs. Kate Tait,
Miss Mary A. Ahearne,
Miss Alvena F. Lausmann.

APPENDIX.

TABULAR FINANCIAL STATEMENTS.

APPROPRIATIONS.

Almshouse and Hospital, Long Island	\$150,195 00
Almshouse, Charlestown	17,000 00
Epileptics, etc., care of	31,000 00
Pauper expenses	4,000 00
Office expenses	4,500 00
Steamer "John Howard"	8,500 00
Total	<u>\$215,195 00</u>

EXPENDITURES.

Almshouse and Hospital, Long Island	\$145,379 56
Almshouse, Charlestown	16,983 44
Epileptics, etc., care of	32,586 33
Pauper expenses	5,338 22
Office expenses	4,419 20
Steamer "John Howard"	8,626 70
Total	<u>\$213,333 45</u>

COMPARISON OF EXPENDITURES OF THE INSTITUTIONS FOR THE
YEARS ENDING JANUARY 31, 1908, AND JANUARY 31, 1909.

	Expenditure for 12 Months.		Increase.	Decrease.
	Ending Jan. 31, 1908.	Ending Jan. 31, 1909.		
Almshouse and Hospital, Long Island	\$153,996 97	\$145,379 56	.....	\$8,617 41
Almshouse, Charlestown	17,352 17	16,983 44	.....	368 73
Totals	\$171,349 14	\$162,363 00	.....	\$8,986 14

INCOME.

ACCOUNTS DEPOSITED WITH CITY COLLECTOR ON ACCOUNT OF
INCOME OF THE DEPARTMENT FOR THE YEAR ENDING
JANUARY 31, 1909.

Board of inmates	\$3,504 54
Sale of live stock	141 00
Sale of rags, bones, barrels, etc.	68 40
Physician's fees	7 50
Total	<u>\$3,721 44</u>

Almshouse, Charlestown.

Board of inmates	\$617 71
Damages to wagon	20 00
Sale of junk, barrels, etc.	4 00
Total.	<u>\$641 71</u>

Sane Epileptics, Inebriates, etc.

Board of inmates at state institutions	\$440 61
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ACTUAL COLLECTIONS MADE BY CITY COLLECTOR ON ACCOUNT
OF INCOME OF DEPARTMENT FOR THE YEAR ENDING
JANUARY, 31, 1909.

Almshouse and Hospital, Long Island	\$3,787 80
Almshouse, Charlestown	625 57
Sane epileptics, etc., care of	96 11
Total	<u>\$4,509 48</u>

COMPARISON OF ACCOUNTS DEPOSITED WITH CITY COLLECTOR ON
ACCOUNT OF INCOME FOR THE YEARS ENDING JANUARY 31,
1908, AND JANUARY 31, 1909.

	January 31, 1908.	January 31, 1909.	Increase.	Decrease.
Almshouse and Hospital, Long Island	\$3,459 11	\$3,721 45	\$262 34	.....
Almshouse, Charlestown	479 41	641 71	162 30	.....
Sane epileptics, etc., care of	276 77	440 61	163 84	.....
Pauper expense	45 00	.....	.....	\$45 00
Total	\$4,260 29	\$4,803 77	\$543 48	

COMPARISON OF ACTUAL COST OF THE INSTITUTIONS FOR THE YEARS ENDING JANUARY 31, 1908, AND JANUARY 31, 1909.

	1908.	1909.			Decrease.
	Actual Cost.	Expended.	Actual Income.	Actual Cost.	
Almshouse and Hospital, Long Island	\$150,765 80	\$145,379 56	\$3,787 80	\$141,591 76	\$9,174 04
Almshouse, Charlestown.	16,872 76	16,983 44	625 57	16,357 87	514 89
Total	\$167,638 56	\$162,363 00	\$4,413 37	\$157,949 63	\$9,688 93

AVERAGE EXPENDITURE FOR, AND ACTUAL COST OF, EACH INMATE OF THE INSTITUTIONS FOR THE YEAR ENDING JANUARY 31, 1909.

	EXPENDITURE.		ACTUAL COST.	
	Per Year.	Per Week.	Per Year.	Per Week.
Almshouse and Hospital, Long Island,	\$166 72	\$3 21	\$162 38	\$3 12
Almshouse, Charlestown	154 39	2 97	148 71	2 86

Per capita expense in Almshouse Department, Long Island, per year, \$119.52; per week, \$2.30.
Per capita expense in Hospital Department, Long Island, per year, \$259.04; per week, \$4.98.

TABLE SHOWING GROSS COST OF THE INSTITUTIONS FOR LAST FIVE YEARS.

YEAR ENDING.	Jan. 31, 1905.	Jan. 31, 1906.	Jan. 31, 1907.	Jan. 31, 1908.	Jan. 31, 1909.
Almshouse and Hospital, Long Island,	\$146,497 80	\$150,358 92	\$156,887 53	\$153,996 97	\$145,379 56
Almshouse, Charlestown	16,151 38	15,994 40	15,998 63	17,352 17	16,983 44

AVERAGE GROSS EXPENDITURE PER WEEK, PER INMATE,
CLASSIFIED.*Almshouse and Hospital, Long Island.*

YEAR ENDING.	Average Number.	Salaries.	Subsistence.	Fuel and Light.	Clothing and Bedding.	Repairs.	Agricultural Supplies.	Medical Supplies.	All other Items.	Total.
Jan. 31, 1905.....	829	85	1 19	54	25	18	07	10	22	3 40
Jan. 31, 1906.....	857	87	1 25	40	24	18	07	12	24	3 37
Jan. 31, 1907.....	800	98	1 25	56	25	15	11	13	34	3 77
Jan. 31, 1908.....	791	1 07	1 26	51	21	13	12	13	31	3 74
Jan. 31, 1909.....	872	94*	1 15	41	21	14	08	09	19	3 21

* Including salaries for religious services which in previous years have been included in "all other items." Excluding this item, the per capita for salaries would be 90 cents.

Almshouse, Charlestown.

YEAR ENDING.	Average Number.	Salaries.	Subsistence.	Fuel and Light.	Clothing and Bedding.	Repairs.	Agricultural Supplies.	Medical Supplies.	All other Items.	Total.
Jan. 31, 1905.....	101	85	95	48	13	11	18	03	35	3 08
Jan. 31, 1906.....	110	74	84	37	08	41	11	02	23	2 80
Jan. 31, 1907.....	118	70	78	32	13	33	09	02	24	2 61
Jan. 31, 1908.....	108	79	1 02	42	13	21	16	03	32	3 08
Jan. 31, 1909.....	110	77	99	43	11	23	15	04	25	2 97

TABLE SHOWING NET COST PER WEEK PER INMATE FOR LAST
FIVE YEARS.

YEAR ENDING.	Jan. 31, 1905.	Jan. 31, 1906.	Jan. 31, 1907.	Jan. 31, 1908.	Jan. 31, 1909.
Almshouse and Hospital, Long Island,	\$3 30	\$3 27	\$3 65	\$3 66	\$3 12
Almshouse, Charlestown.....	2 97	2 73	2 47	3 00	2 86

COMPARISON OF AVERAGE POPULATION AND EXPENDITURES FOR FIVE YEARS.

Almshouse and Hospital, Long Island.

POPULATION.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
Number of inmates beginning fiscal year.....	806	1,015	921	850	911
Number received during year,	1,252	1,237	1,235	1,198	1,353
Number discharged during year (including deaths)....	1,043	1,331	1,306	1,137	1,260
Number at end of fiscal year.	1,015	921	850	911	1,004
Daily average attendance (<i>i. e.</i> , number inmates actually present) during fiscal year..	810	845	788	780	864
Average number officers and employees during fiscal year,	114	122	130	135	123
CURRENT EXPENSES.					
Salaries and wages.....	\$36,720 19	\$38,640 19	\$40,622 26	\$43,867 62	\$40,950 55
Clothing.....	7,369 87	8,169 44	6,772 11	6,219 82	6,480 76
Sustenance:					
Inmates }	51,271 00	55,785 59	52,038 52	51,842 95	{ 33,321 67
Officers. }					{ 18,601 92
Ordinary repairs and replacements.....	7,834 77	8,139 13	6,118 63	5,439 74	6,176 80
Office, domestic and out-door expenses.....	43,301 97	39,624 57	51,336 01	46,626 84	39,847 86
Total.....	\$146,497 80	\$150,358 92	\$156,887 53	\$153,996 97	\$145,379 56
EXTRAORDINARY EXPENSES.					
New buildings, land.....	12,009 99	5,154 03	.....	.....	15,639 41
Permanent improvements....					.
Grand total.....	\$158,507 79	\$155,512 95	\$156,887 53	\$153,996 97	\$161,018 97
PER CAPITA EXPENDITURE FOR INMATES (based on actual attendance):					
Per year.....	\$180 86	\$177 94	\$199 09	\$197 43	\$168 26
Per week.....	\$3 48	\$3 42	\$3 83	\$3 80	\$3 23
PER CAPITA EXPENDITURE FOR SUSTENANCE OF OFFICERS AND EMPLOYEES:					
Per year.....	*	*	*	*	\$145 33†
Per week.....	*	*	*	*	\$2 79†

* NOTE.—From the records on file, it is not possible to give this figure for the years 1904-05, 1905-06, 1906-07 and 1907-08.
† NOTE.—Figured on the basis of 128 instead of 123 officers (including the crew of the steamer "John Howard," for whom board is provided). The expenses of the steamer are not included in the expenses of the institution, and the average number of officers given above does not include the crew.

COMPARISON OF AVERAGE POPULATION AND EXPENDITURES FOR
FIVE YEARS.*Almshouse, Charlestown.*

POPULATION.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
Number of inmates beginning fiscal year.....	107	116	115	120	111
Number received during year,	65	74	123	106	107
Number discharged during year (including deaths)....	56	75	118	115	107
Number at end of fiscal year,	116	115	120	111	111
Daily average attendance (<i>i.e.</i> , number inmates actually present) during fiscal year.	99	107	114	103	107
Average number officers and employees during fiscal year,	10	10	10	10	10
CURRENT EXPENSES.					
Salaries and wages.....	\$4,433 17	\$4,253 00	\$4,313 24	\$4,458 96	\$4,399 27
Clothing.....	579 18	384 36	558 52	646 08	550 74
Sustenance:*					
Inmates }	4,997 01	4,788 19	4,778 13	5,747 12	5,637 71
Officers }					
Ordinary repairs and replacements.....	573 65	2,337 55	2,037 38	1,201 58	1,353 33
Office, domestic and out-door expenses.....	5,568 37	4,231 30	4,311 36	5,298 43	5,042 39
Total.....	\$16,151 38	\$15,994 40	\$15,998 63	\$17,352 17	\$16,983 44
EXTRAORDINARY EXPENSES.					
New buildings, land.....					
Permanent improvements....					
Grand total.....	\$16,151 38	\$15,994 40	\$15,998 63	\$17,352 17	\$16,983 44
PER CAPITA EXPENDITURE FOR INMATES (based on actual attendance):					
Per year.....	\$163 14	\$149 48	\$140 34	\$168 47	\$158 72
Per week.....	\$3 14	\$2 87	\$2 70	\$3 23	\$3 05
PER CAPITA EXPENDITURE FOR SUSTENANCE OF OFFICERS AND EMPLOYEES:					
Per year.....	*	*	*	*	*
Per week.....	*	*	*	*	*

* As the Charlestown Almshouse is a comparatively small institution, many supplies are furnished to officers and inmates alike, and a separation of the cost would be impracticable.

EXPENDITURES FOR BOSTON ALMSHOUSE AND HOS-
PITAL, LONG ISLAND, 1908-1909.

Salaries:

James F. English, Superinten- dent January 1, 1908, to April 30, 1908.	\$833 32	
Charles E. Donlan, M. D., Superintendent, May 1, 1909, to December 31, 1909 . . .	1,666 68	
Employees, January 1, 1908, to December 31, 1908 . . .	38,450 55	
		\$40,950 55
Food		51,923 59
Fuel		18,467 11
Clothing		6,480 76
Repairs and improvements		6,176 80
Agricultural supplies		3,840 47
Medical and surgical supplies		3,605 10
Bedding		2,703 80
Furniture and upholstery		2,037 58
Household supplies		1,870 31
Religious services		1,719 32
Tobacco and snuff		1,065 53
Soap and laundry supplies		816 38
Ice		788 50
Printing		592 97
Liquors		563 72
Stationery		307 13
Electric lights		240 11
Telephone		231 63
Postage		226 24
Library and school supplies		167 44
Insurance (boiler)		155 00
Burials.		147 69
Lessons in massage and cooking		80 00
Disinfectants		55 82
Freight		52 16
Entertainment of inmates		51 18
Advertising		48 52
Gasoline		14 15
Total		<u>\$145,379 56</u>

EXPENDITURES FOR ALMSHOUSE; CHARLESTOWN, 1908-1909.

Salaries:

Mary A. Morris, Superinten-		
dent January 1, 1908, to		
December 31, 1908. . . .	\$1,200 00	
Employees, January 1, 1908		
to December 31, 1908. . . .	3,199 27	
		\$4,399 27
Food		5,637 71
Fuel		1,962 27
Repairs and improvements		1,353 33
Agricultural supplies		839 11
Clothing		550 74
Electric lights		437 58
Furniture and upholstery.		301 20
Household supplies		300 03
Ice		228 84
Tobacco and snuff		215 97
Soap and laundry supplies		197 45
Medical and surgical supplies		179 76
Telephone		78 58
Bedding		66 51
Oils		66 00
Printing		54 24
Liquors		20 15
Transportation		20 00
Stationery		15 41
Postage		15 00
Gas		13 14
Library and school supplies		12 50
Disinfectants		9 30
Religious services		5 00
Freight		4 35
Total		<u>\$16,983 44</u>

EXPENDITURES FOR SANE EPILEPTICS, INEBRIATES, ETC.,
1908-1909.

Support of poor at Massachusetts School for	
Feeble-minded	\$18,210 22
Support of poor at Massachusetts Hospital for	
Epileptics	6,885 34
Support of poor at Foxboro State Hospital	5,732 07
Support of poor at Insane Hospitals	1,463 89
Support of poor at Wrentham State School	294 81
Total	<u>\$32,586 33</u>

EXPENDITURES FOR PAUPER EXPENSE, 1908-1909.

Support of poor in charge of Commonwealth	\$2,600 40
Support of poor at Massachusetts State Sanatorium	2,380 79
Support of poor in charge of cities and towns	352 52
Transportation	4 51
Total	<u>\$5,338 22</u>

EXPENDITURES FOR "OFFICE EXPENSE," 1908-1909.

Salaries	\$3,555 62
Stationery	274 37
Printing	218 02
Office expense	159 85
Telephone	120 80
Postage	89 24
Transportation	1 30
Total	<u>\$4,419 20</u>

EXPENDITURES FOR STEAMER "JOHN HOWARD," 1908-1909.

Salaries of captain and crew	\$4,145 84
Repairs	2,618 41
Fuel	1,474 60
Chandlery	254 05
Towboats	106 00
Water	26 00
Furniture	1 80
Total	<u>\$8,626 70</u>

SPECIAL LOAN APPROPRIATIONS.

 APPROPRIATION FOR ICE-HOUSE, LONG ISLAND.

Balance from 1907-1908	<u>\$2,000 00</u>
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Transferred.

 APPROPRIATION FOR MORTUARY AND RECEIVING-ROOM,
LONG ISLAND.

Balance from 1907-1908	<u>\$3 56</u>
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No drafts.

APPROPRIATION FOR WHARF, LONG ISLAND.

Balance from 1907-1908		\$16,500 00
Contract, building new wharf . . .	\$13,279 75	
Contract, removing old wharf . . .	1,700 00	
Inspection	440 00	
Incidentals	219 66	15,639 41
Balance		<u>\$860 59</u>

APPROPRIATION FOR NEW BOILER, LONG ISLAND.

Amount of appropriation (by transfer) . . .	<u>\$2,000 00</u>
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No drafts.

INVENTORY AND APPRAISAL OF REAL AND PERSONAL ESTATE, JANUARY 31, 1909.

OFFICE OF THE TRUSTEES, BOSTON.

Furniture, etc.	\$783 28
Stationery and office supplies	476 40
Total	<u>\$1,259 68</u>

ALMSHOUSE AND HOSPITAL, LONG ISLAND.

Land	\$508,800 00	
Hospital	140,000 00	
Men's building	100,000 00	
Women's building	70,000 00	
Nurses' Home	22,000 00	
Chapel	11,500 00	
Residence of superintendent	10,500 00	
Mortuary	10,000 00	
Power-house and equipment	78,700 00	
Waterworks	26,000 00	
Electrical plant	10,500 00	
Two wharves, with houses	30,000 00	
Tie-up for cattle.	5,000 00	
Cottage and barn	5,000 00	
Piggery, hen house, etc.	1,800 00	
Ice house	500 00	
	<u>\$1,030,300 00</u>	
Less 15 per cent depreciation on buildings and equipment	78,225 00	
	<u>\$952,075 00</u>	
Furniture and household supplies	8,621 83	
Clothing, bedding and dry goods	12,959 94	
Provisions and groceries	4,594 98	
Soap and laundry supplies	154 13	
Library supplies	250 00	
Stationery	366 65	
Medical and surgical supplies	3,009 46	
Liquors	22 45	
Tobacco and snuff	303 32	
Oil and gasoline	121 67	
Fuel	4,088 42	
Building materials and tools	1,943 53	
Agricultural supplies (feed for cattle, etc.)	889 11	
Carriages and agricultural implements	1,383 40	
Live stock	4,122 93	
Total	<u>\$994,906 82</u>	

ALMSHOUSE, CHARLESTOWN.

Land	\$49,200 00
Buildings	22,000 00
Stable	1,200 00
Sheds	800 00

\$73,200 00

Less 15 per cent depreciation on buildings and equipment . . .	3,600 00
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\$69,600 00

Mechanical fixtures	1,426 35
Furniture and household supplies	3,007 85
Clothing, bedding and dry goods	2,580 64
Provisions and groceries	841 43
Soap and laundry supplies	52 26
Library supplies	79 00
Stationery	128 50
Medical and surgical supplies	93 94
Tobacco and snuff	14 70
Fuel	48 10
Building materials and tools	487 31
Agricultural supplies (feed for cattle, etc.)	61 00
Carriages, wagons and agricultural implements	515 20
Live stock: One horse, 3 cows, 8 pigs, 38 hens	525 00

Total \$79,461 28

STEAMER "JOHN HOWARD."

Steamer	\$4,000 00
Boats	90 00
Fire-hose	100 00
Ship chandlery, etc.	200 00
Cabin furniture	25 00

Total \$4,415 00

RECAPITULATION OF VALUATION.

Office of the Trustees, Boston	\$1,259 68
Boston Almshouse and Hospital, Long Island	994,906 82
Almshouse, Charlestown	79,461 28
Steamer "John Howard".	4,415 00

Total valuation of all department property, \$1,080,042 78

STAFF OF OFFICERS AND SALARIES PAID,
JANUARY 31, 1909.

TRUSTEES' OFFICE.

	Designation of Office.	Salary per Month
*1	Executive clerk (at 28 Court square, Boston)	\$100 00
*1	Bookkeeper " " " "	100 00
*1	Clerk " " " "	60 00
*1	Clerk (temporary) " " " "	50 00

BOSTON ALMSHOUSE AND HOSPITAL, LONG ISLAND.

	Designation of Office.	Salary per Month.
1	Superintendent	\$208 33
1	Resident physician	125 00
1	Chief officer of men's building	83 33
*1	Pathologist	41 67
6	House-officers (unpaid)	—
1	Druggist	60 00
1	Chief clerk	75 00
1	Bookkeeper	35 00
1	Stenographer	25 00
†1	Mail messenger	10 00
1	Storekeeper	40 00
1	Meat cutter	40 00
1	Chief engineer	100 00
1	Assistant engineer	60 00
2	" engineers	50 00
3	Firemen	50 00
1	Farmer	50 00
3	Assistant farmers	25 00
1	Gardener	35 00
1	Receiving officer	35 00
3	Watchman	40 00
1	Carpenter	55 00
1	Laundryman	45 00
5	Orderlies	30 00
3	"	25 00
1	Baker	60 00
1	Cook (male)	50 00
2	Housekeepers	30 00
1	Matron	40 00
8	Matrons	30 00
1	Matron	25 00

* Non-resident at Institution.

† Employed also by Institutions Registration Department.

1	Superintendent of nurses	.	.	.	.	.	.	.	\$58 33
1	Night superintendent of nurses	.	.	.	.	.	.	.	40 00
3	Head nurses	.	.	.	.	.	.	.	35 00
5	" "	.	.	.	.	.	.	.	30 00
13	Nurses (second year training)	.	.	.	.	.	.	.	12 00
27	" (first year training)	.	.	.	.	.	.	.	10 00
3	Cooks	.	.	.	.	.	.	.	30 00
1	Cook	.	.	.	.	.	.	.	25 00
1	Assistant cook	.	.	.	.	.	.	.	18 00
2	Housemaids	.	.	.	.	.	.	.	20 00
1	Housemaid	.	.	.	.	.	.	.	18 00
3	Wardmaids	.	.	.	.	.	.	.	18 00
2	Wardmaids	.	.	.	.	.	.	.	14 00
2	Laundresses	.	.	.	.	.	.	.	20 00
2	"	.	.	.	.	.	.	.	18 00

FOR RELIGIOUS SERVICES AT LONG ISLAND.

*1	Chaplain Emeritus. (unpaid)	.	.	.	.	.	.	.	—
1	Chaplain	.	.	.	.	.	.	.	\$50 00
*1	"	.	.	.	.	.	.	.	50 00
*1	Organist	.	.	.	.	.	.	.	25 00
*1	"	.	.	.	.	.	.	.	12 50

ALMSHOUSE, CHARLESTOWN.

1	Superintendent	.	.	.	.	.	.	.	\$100 00
*1	Visiting physician	.	.	.	.	.	.	.	40 00
1	Farmer	.	.	.	.	.	.	.	40 00
1	Engineer	.	.	.	.	.	.	.	45 00
1	Watchman	.	.	.	.	.	.	.	25 00
3	Matrons	.	.	.	.	.	.	.	25 00
1	Cook	.	.	.	.	.	.	.	25 00
1	Baker	.	.	.	.	.	.	.	17 00

STEAMER "JOHN HOWARD."

1	Captain	.	.	.	.	.	.	.	\$100 00
1	Mate and pilot	.	.	.	.	.	.	.	70 00
1	Engineer	.	.	.	.	.	.	.	75 00
1	Assistant engineer	.	.	.	.	.	.	.	50 00
1	Fireman and deckhand	.	.	.	.	.	.	.	50 00

* Non-resident at Institution.

POPULATION STATISTICS, ALMSHOUSE AND HOSPITAL.

DAY OF MONTH.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.
1.....	911	935	909	829	823	795	821	834	817	871	909	942
2.....	911	935	909	829	819	794	821	834	819	871	906	943
3.....	910	930	910	831	813	794	820	833	821	867	909	946
4.....	917	935	915	830	804	792	820	834	820	871	907	946
5.....	921	935	912	827	805	793	819	834	819	872	910	945
6.....	926	940	911	822	804	793	815	833	825	877	911	952
7.....	926	939	902	820	803	792	823	832	826	878	910	952
8.....	930	940	900	827	803	793	829	831	827	878	910	958
9.....	931	939	898	829	797	796	827	825	834	878	916	965
10.....	930	937	899	833	796	796	825	819	831	875	919	966
11.....	939	938	900	833	795	796	823	816	835	879	923	967
12.....	943	941	902	831	797	799	820	818	835	883	923	967
13.....	944	942	902	828	800	797	821	820	835	887	925	974
14.....	947	944	887	828	802	802	825	819	842	888	925	977
15.....	947	944	887	830	801	801	826	819	841	894	920	981
16.....	948	944	882	834	794	805	826	818	843	894	917	983
17.....	946	931	881	838	791	805	826	811	844	885	917	987
18.....	949	929	880	838	790	804	826	810	847	891	925	987
19.....	947	931	874	840	797	803	827	808	847	897	933	985
20.....	950	931	875	835	803	802	829	810	846	900	930	983
21.....	950	937	873	836	803	799	829	807	851	901	930	990
22.....	947	938	861	833	803	800	833	809	855	904	922	990
23.....	945	938	859	833	802	799	834	810	860	903	924	998
24.....	945	930	859	836	802	805	833	809	865	901	925	996
25.....	943	927	856	836	797	810	828	804	868	901	925	996
26.....	942	925	858	827	803	814	827	806	867	904	924	996
27.....	944	924	857	825	802	814	831	807	870	903	928	995
28.....	940	926	849	821	803	814	832	808	872	908	928	997
29.....	938	924	835	827	802	813	834	814	871	907	930	1,001
30.....	.....	924	826	823	798	820	833	811	874	906	936	1,004
31.....	.....	914	.....	824	.....	822	832	.....	872	.....	943	1,005
Average..	937	934	882	830	802	802	826	818	844	889	921	977
Maximum,	950	944	915	840	823	822	834	834	874	908	943	1,005
Minimum.	910	914	826	820	790	792	815	804	817	867	906	942

Average, 872. Maximum, 1,005. Minimum, 790.

NOTE.— The above figures give the morning census. On January 31, 1909, there was one discharge (by death), which would make the morning census for February 1, 1909, 1,004.

ALMSHOUSE AND HOSPITAL, LONG ISLAND.

Movement of Population.

	Male.	Female.	Total.		Male.	Female.	Total.
Remaining Jan. 31, 1908.....	498	413	911	Discharged during year,	734	292	1,026
Admitted since....	888	438	1,326	Died during year.....	92	142	234
Born.....	13	14	27	Remaining Jan. 31, 1909	573	431	1,004
Grand total.....	1,399	865	2,264	Grand total.....	1,399	865	2,264

ALMSHOUSE, CHARLESTOWN.

Movement of Population.

	Male.	Female.	Total.		Male.	Female.	Total.
Remaining Jan. 31, 1908.....	48	63	111	Discharged during year,	61	43	104
Admitted since....	62	45	107	Died during year.....	3	3	3
				Remaining Jan. 31, 1909	49	62	111
Grand total.....	110	108	218	Grand total.....	110	108	218

NUMBER OF INMATES REMAINING IN THE INSTITUTIONS
JANUARY 31, 1908 AND 1909.

	Jan. 31, 1908.	Jan. 31, 1909.	Decrease.	Increase.
Almshouse and Hospital, Long Island,	911	1,004	.....	93
Almshouse, Charlestown.....	111	111	.....	.....
Total.....	1,022	1,115	.....	93

AVERAGE NUMBER OF INMATES DURING THE YEARS ENDING
JANUARY 31, 1908 AND 1909.

	1908.	1909.	Increase.
Almshouse and Hospital, Long Island.....	791	872	81
Almshouse, Charlestown.....	108	110	2
Total.....	899	982	83

ADULT MALES (711) ADMITTED DURING YEAR ENDING
JANUARY 31, 1909.

MEN	AGE PERIODS.								Total.	Per cent.
	16 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	Over 85.		
SOCIAL CONDITION.										
Single.....	34	83	110	112	52	9	2	...	402	56+
Married.....	1	16	38	44	32	17	5	...	153	22—
Widowed.....	...	3	19	39	43	21	17	2	144	20+
Divorced or separated.....	...	...	...	5	5	...	2	...	12	2—
Deserted.....	...	...	...	...	...	...	...	...	...	...
Total.....	35	102	167	200	132	47	26	2	711	.....
Per cent.....	5—	14+	23+	28+	19—	7—	4—	0+	.....	.....
NUMBER OF TIMES ADMITTED TO ALMSHOUSE.										
1st.....	21	54	52	60	42	29	13	1	272	38+
2 to 10.....	14	45	91	102	58	15	10	1	336	47+
10 to 20.....	...	3	15	19	15	3	1	...	56	8—
20 to 30.....	...	...	9	12	7	...	1	...	29	4+
30 or over.....	...	...	...	7	10	...	1	...	18	3—
Total.....	35	102	167	200	132	47	26	2	711	.....
ADMITTED ON ARRIVAL TO										
Hospital.....	25	60	79	81	44	21	8	1	319	45—
Dormitory.....	10	42	88	119	88	26	18	1	392	55+
Total.....	35	102	167	200	132	47	26	2	711	.....
Died.....										
Died.....	...	1	11	11	6	3	4	...	36	5+
Discharged.....	22	55	56	54	26	11	5	...	229	32+
*Discharged and readmitted..	7	16	43	46	31	5	4	1	153	22—
Remaining January 31, 1909,	6	30	57	89	69	28	13	1	293	41+
Total.....	35	102	167	200	132	47	26	2	711	.....

* Of the 153 discharged and readmitted, 2 died after readmission, 52 were discharged and 99 were in the institution on January 31, 1909.

BASIS OF ABOVE EXAMINATION.

Total admissions to Long Island 1,353, and Charlestown 107.....	1,460
Deducting all readmissions (276) and transfers (13).....	289
Leaves as the number of individuals admitted during the year.....	1,171
Deducting admissions of children under 16 years of age (see page 36).....	55
Leaves as a basis of above examination 711 men and 405 women.....	1,116

ADULT FEMALES (405) ADMITTED DURING YEAR
ENDING JANUARY 31, 1909.

WOMEN.	AGE PERIODS.								Total.	Per cent.
	16 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	Over 85.		
SOCIAL CONDITION.										
Single.....	19	11	13	17	22	15	7	...	104	26—
Married.....	10	23	33	25	23	10	4	...	128	32—
Widowed.....	1	3	16	29	52	44	11	3	159	39+
Divorced or separated.....	.....	1	.....	3	3	1	1	...	9	2+
Deserted.....	.....	1	.....	1	1	2	.....	.....	5	1+
Total.....	30	39	62	75	101	72	23	3	405	.....
Per cent.....	7+	10—	15+	19—	25—	18—	6—	1—	.....	.....
NUMBER OF TIMES ADMITTED TO ALMSHOUSE.										
1st.....	28	25	39	39	47	33	14	2	227	56—
2 to 10.....	2	12	20	27	43	32	8	1	145	36—
10 to 20.....	.....	2	3	7	9	5	1	...	27	7—
20 to 30.....	.....	.....	.....	1	2	1	.....	.....	4	1—
30 or over.....	.....	.....	.....	1	.....	1	.....	.....	2	0+
Total.....	30	39	62	75	101	72	23	3	405	.....
ADMITTED ON ARRIVAL TO										
Hospital.....	28	31	42	41	52	36	13	2	245	60+
Dormitory.....	2	8	20	34	49	36	10	1	160	40—
Total.....	30	39	62	75	101	72	23	3	405	.....
DIED, DISCHARGED, DISCHARGED AND READMITTED, REMAINING JANUARY 31, 1909.										
Died.....	3	3	7	8	17	15	7	...	60	15—
Discharged.....	20	15	29	24	21	15	2	2	128	32—
Discharged and readmitted,*	.....	3	5	12	12	10	2	1	45	11+
Remaining January 31, 1909,	7	18	21	31	51	32	12	...	172	42+
Total.....	30	39	62	75	101	72	23	3	405	.....

* Of the 45 discharged and readmitted, 5 died after readmission, 10 were discharged and 30 were in the institution on January 31, 1909.

BIRTHPLACE OF ADULTS ADMITTED DURING THE YEAR.

	INMATES.				PARENTS.	
	Men.	Women.	Total.	Per cent.	Number.	Per cent.
Boston	443	96	539	48+	95	4+
Other cities and towns in United States . .	80	43	123	11+	176	8—
Foreign countries . . .	188	266	454	41—	1,893	85—
Unknown . . . . .	.....	.....	.....	.....	68	3+
Totals	711	405	1,116	.....	2,232	

CHILDREN UNDER 16 YEARS OF AGE (55)
ADMITTED DURING THE YEAR ENDING JANUARY 31, 1909.

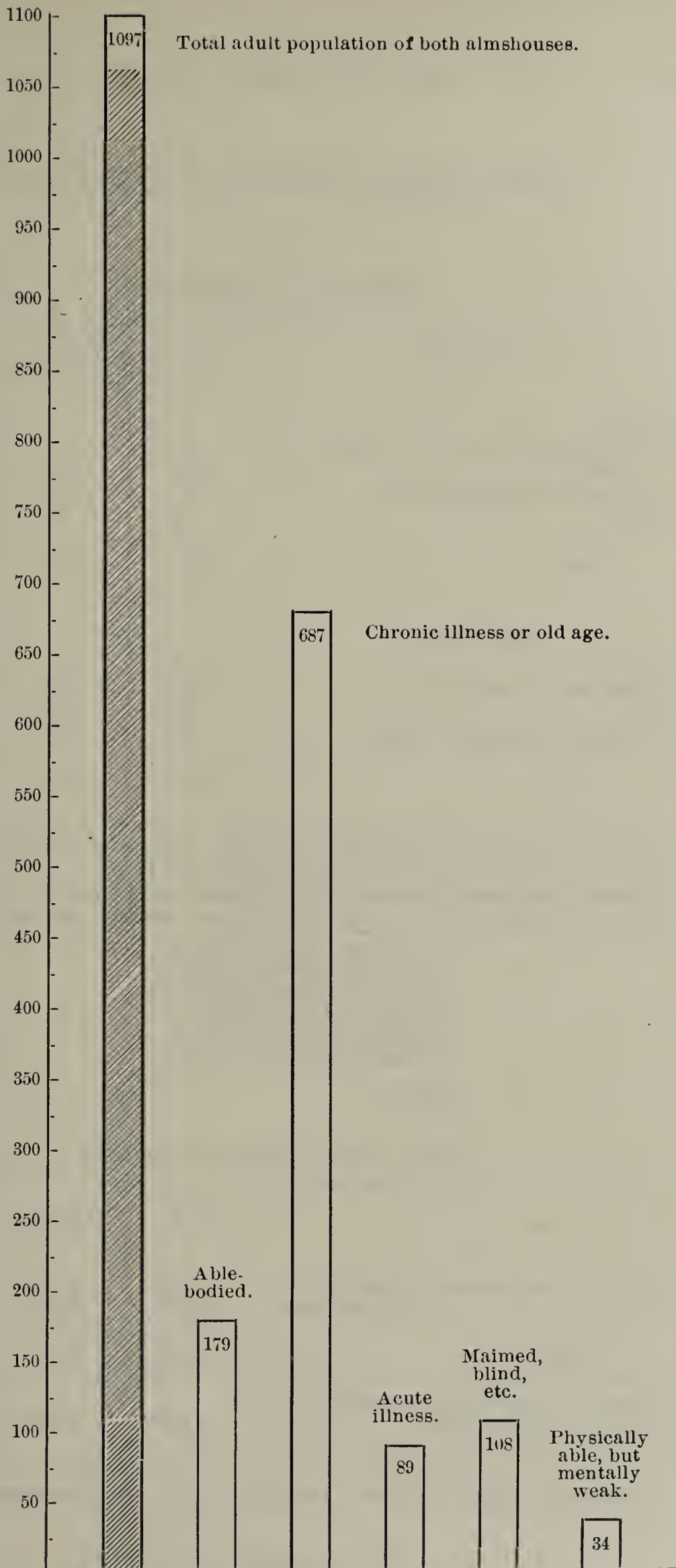
ADMITTED.		DISCHARGED.	
Born at Long Island	27	Died	14
Admitted	28	Discharged	26
(9 were admitted with mother and 18 at request of Trustees for Children.)		Remaining	15
Total	55	Total	55

RUTLAND PATIENTS, 1908-09.

Amount expended during year for support of patients at Massachusetts State Sanatorium, Rutland	\$2,382 75
Number of patients in the Sanatorium at the ex- pense of the Pauper Institutions Department, February 1, 1908	11
Admitted during the year	15
Discharged during the year	25
Remaining January 31, 1909	1

CHART

Showing the Proportion of Able-bodied Inmates, and of those Incapacitated for Self-support, to the Total Adult Population of Almshouse and Hospital at Long Island, and of Almshouse at Charlestown, on January 31, 1909.



NOTE.—These categories, though not given as medical statements, are yet, we believe, accurate for all practical purposes, and have been carefully determined by the superintendents of the two institutions. Each individual is counted in one category only, although many might fairly appear in two or even three categories; as, for instance, a man who is old may be lame, and also be suffering from acute bronchitis, which would place him under three categories, while he appears in this chart under but one.

LONG ISLAND HOSPITAL STATISTICS.

Movement of Population.

ADMISSIONS.	Male.	Female.	Total.
Inmates:			
Remaining in hospital, January 31, 1908.....	132	158	290
Admitted during the year.....	531	486	1,017
Born.....	13	14	27
Total.....	676	658	1,334
DISCHARGES.			
Inmates:			
Discharged during the year.....	432	357	789
Died.....	90	142	232
Remaining January 31, 1909.....	154	159	313
Total.....	676	658	1,334

During the year two deaths occurred outside the hospital: one from suicidal drowning and one of acute dilatation of heart.

Besides the cases enumerated above, and not included in the medical statistics, the following persons, not inmates, received treatment:

- 1 man from Peddock's Island.
- 4 boys from Rainsford Island.
- 1 boy from picnic grounds.
- 3 girls from picnic grounds.
- 1 man from Spectacle Island.
- 1 man from Rainsford Island.
- 5 men from boats in harbor.

16 Total

Cases Treated, Medical and Surgical.

	Male.	Female.	Total.
Total number treated in hospital.....	1,435	1,889	3,324
" " as out-patients.	2,129	2,020	4,149
Total.....	3,564	3,909	7,473
Number of surgical dressings in Out-Patient Department.....	5,790	5,096	10,886

Maximum population, 318. Minimum, 263. Daily average, 295.



ANNUAL REPORT
OF THE
PENAL INSTITUTIONS DEPARTMENT
FOR THE
YEAR ENDING JANUARY 31, 1909.

BOSTON, February 1, 1909.

To the Mayor of the City of Boston:

SIR,—I herewith respectfully submit the twelfth annual report of the Penal Institutions Department, in compliance with chapter 3, section 24, of the Revised Ordinances of the City of Boston.

The present commissioner succeeded the Hon. John B. Martin on March 2, 1908.

This department has charge of the Suffolk County House of Correction at Deer Island and also the steamer "Monitor."

Items of expenditure, income and actual cost are as follows:

FINANCIAL STATEMENT.

House of Correction.

Appropriation	\$180,000 00	
Transfer from reserve fund	15,397 34	
Income applied to appropriation,	187 62	
		\$195,584 96
<i>Carried forward</i>		\$195,584 96

Brought forward \$195,584 96

Office Expenses.

Appropriation 21,675 00

Steamer "Monitor."

Appropriation 23,000 00

\$240,259 96

EXPENDITURES.

House of Correction	. . .	\$195,584 96	
Office expenses	. . .	19,920 27	
Steamer "Monitor"	. . .	22,594 10	
			<u>\$238,099 33</u>

HOUSE OF CORRECTION.

Income accounts committed to City Collector
for year ending January 31, 1909 \$5,829 83

Actual cash collections for year ending January
31, 1909, irrespective of when committed for
collection \$6,306 99

NET COST HOUSE OF CORRECTION, 1908-1909.

Expended.	Cash Income.	Net Cost.
<u>\$195,584.96</u>	<u>\$6,306.99</u>	<u>\$189,277.97</u>

Table Showing Gross Cost House of Correction for Five Years.

YEAR ENDING.	January 31, 1905.	January 31, 1906.	January 31, 1907.	January 31, 1908.	January 31, 1909.
	\$194,461 36	\$182,342 43	\$167,358 11	\$179,706 34	\$195,584 96

Net Cost per Week, per Inmate, for Five Years.

YEAR ENDING.	January 31, 1905.	January 31, 1906.	January 31, 1907.	January 31, 1908.	January 31, 1909.
	\$2 36	\$2 72	\$3 13	\$3 36	\$2 52

Gross Expenditure per Week, per Inmate, Classified.

YEAR ENDING.	Average Number.	Salaries.	Subsistence.	Fuel and Light.	Clothing and Bedding.	Repairs.	Agricultural.	Medical Supplies.	All other Items.	Totals.
January 31, 1905	1,555	\$0 72	\$0 96	\$0 26	\$0 20	\$0 07	\$0 05	\$0 03	\$0 11	\$2 40
January 31, 1906	1,264	86	1 01	31	22	11	05	03	18	2 77
January 31, 1907	1,007	1 08	1 02	47	21	15	06	03	18	3 20
January 31, 1908	1,013	1 13	1 08	48	25	15	09	03	20	3 41
January 31, 1909	1,445	86	1 01	22	23	07	06	02	13	2 60

EXPENDITURES CLASSIFIED.

House of Correction.

Salaries and wages:

James H. Cronin, master	\$2,500 00	
Employees	61,867 62	
		\$64,367 62
Food		75,556 53
Ice		160 03
Clothing		15,321 02
Bedding		2,108 40
Furniture and upholstery and household supplies,		5,420 07
Fuel		15,594 16
Light:		
Electric lights	\$363 43	
Oil	131 09	
		494 52
Medical and surgical supplies	\$1,112 16	
Liquors	33 53	
		1,145 69
Printing		364 22
Advertising		123 33
Stationery		167 08
Postage		296 21
Religious services		2,069 27
Instruction and amusement:		
Entertainment of inmates	\$112 23	
Library and school supplies	363 80	
		476 03
Disinfectants		137 88
Repairs and improvements		5,479 82
Agricultural		4,299 53
Freight		34 39
Transportation		40 13
Tobacco		336 05
Soap and laundry supplies		804 74
Telephones		243 16
Gratuities		435 08
Insurance		110 00
		\$195,584 96

ESTIMATE OF HOSPITAL EXPENSES.

Current expenses	\$3,372 72
Salaries	6,610 08
Clothing	904 92
Subsistence	7,821 48
Medical supplies, etc.	1,145 69
Total	\$19,854 89

NEW HOUSE OF CORRECTION.

Balance, February 1, 1908	\$10,082 85
C. H. Sanborn, heater	\$273 36
W. C. Norcross Company, cement	385 00
Curtis & Pope Lumber Company, cement, ...	197 56
All other items	103 26
	959 18
Balance, February 1, 1909	<u>\$9,123 67</u>

WALL, ETC., DEER ISLAND.

Balance, February 1, 1908	\$14,141 06
-------------------------------------	-------------

EXPENDITURES.

Account Wall.

W. A. Murtfeldt Company, ac- count contract wall extension	\$1,264 80	
Salary of inspector, Fitz, Dana & Co., material for gate in wall	236 00	
	112 74	
All other items	104 31	
		\$1,717 85

Account New Piggery.

W. A. Murtfeldt Company, ac- count contract	\$2,980 78	
Advertising pro- posal	74 90	
Salary of inspector, All other items	76 00	
	282 08	
		3,413 76
		5,131 61
Balance, February 1, 1909		<u>\$9,009 45</u>

EXHIBIT OF INDUSTRY ACCOUNTS, HOUSE OF CORRECTION.

Clothing Department.

<i>Dr.</i>		<i>Cr.</i>	
Stock on hand, February 1, 1908.....	\$9,721 82	Cash receipts, year ending January 31, 1909,	\$38,168 39
Outstanding accounts, February 1, 1908....	4,768 81	Outstanding accounts, February 1, 1909....	9,155 68
Goods purchased, February 1, 1908, to January 31, 1909.....	46,663 76	Stock on hand, February 1, 1909.....	16,353 25
			<u>\$63,677 32</u>
	\$61,154 39		
Balance	2,522 93		
	<u>\$63,677 32</u>		

Stone Department.

<i>Dr.</i>		<i>Cr.</i>	
Stock on hand, February 1, 1908.....	\$3,216 23	Cash receipts, year ending January 31, 1909,	\$14,073 73
Outstanding accounts, February 1, 1908....	1,147 61	Outstanding accounts, February 1, 1909....	—
Goods purchased, February 1, 1908, to January 31, 1909.....	14,330 60	Stock on hand, February 1, 1909.....	9,587 56
			<u>\$23,661 29</u>
	\$18,694 44		
Balance	4,966 85		
	<u>\$23,661 29</u>		

NOTE.—Owing to an error noted too late for correction, the balance on above account in eleventh annual report appeared as \$304.40. This amount should have read \$2,846.11, or sub-divided would read:

Clothing department.....	\$1,491 01
Stone department.....	1,355 10

OFFICE EXPENSES.

Classified.

Salaries:

John B. Martin, commissioner .	\$833 34	
Vernon V. Skinner, commissioner.	4,152 77	
Herbert S. Carruth, assistant commissioner	2,493 06	
Employees	11,556 07	
		<u>\$19,035 24</u>
Printing		255 93
Stationery		148 31
Postage		174 96
Office expenses		10 31
Transportation		163 61
Telephone and tolls		131 91
		<u>\$19,920 27</u>

STEAMER "MONITOR."

Classified.

Salaries	\$13,104 00
Fuel	3,037 05
Repairs	1,438 04
Repairs on wharf	65 11
Dock rent	4,000 00
Steamer hire	300 00
Electric lights	14 35
Chandlery and supplies	457 15
Telephone and tolls	109 50
Furnishings	20 41
Printing and stationery	48 49
	\$22,594 10

Income accounts committed to City Collector for year ending January 31, 1909	\$34 43
Actual cash income received for year ending Jan- uary 31, 1909	\$34 43

Expended.
\$22,594.10

Actual Income.
\$34.43

Net Cost.
\$22,559.67

POPULATION.

The average daily population for the year has been 1,445, an increase of almost 50 per cent over the previous year. This extraordinary increase is due in large measure to the prevailing business depression. Numbers of people have been thrown out of employment, and through enforced idleness and resulting despondency many have been tempted to over-indulgence in drink and to the commission of petty crimes, which have resulted in their imprisonment. This is particularly shown by the fact that during the year there have been 4,227 persons committed for the first time out of a total of 11,304. This large number of first commitments, I feel, should properly be made one of the most serious features of this report, since owing to this increase in numbers there has fallen upon the citizens of Boston an increased financial burden for maintenance of this institution. Inasmuch as about 40 per cent of the total population is made up of persons belonging outside of this county, there is reason for securing some readjustment of the charge for the maintenance of such non-residents.

A part of the increased cost for maintenance this year is due to the higher cost of commodities necessary in the conduct of the institution. In the matter of fixed charges there has been no increase. The growth of the population through the year was so steady and alarming that the chief problem was the husbanding of the appropriation for the purpose of actually maintaining the inmates. For this reason substantially only such repairs as were of an absolutely necessary nature were undertaken, and these were general throughout the institution. Owing to the takings of land from the institution by the United States Government the creation of a new cemetery and receiving tomb were made necessary, and these have been completed. All the bodies in the old cemetery have been carefully transferred. Substantial progress has also been made on the construction of the new reservoir. The boundary wall separating the government and institution's property has been completed and formally accepted by the Federal Government.

Before taking up the problem of the general scope of the institution there are certain changes and additions to the plant which should be mentioned.

In order to comply with the requirements of the state law with reference to the classification or differentiation of the short and long termed prisoners a new dining room will be built, plans for which have been made and are now ready for the builders' competition. This will result both in a more economical administration and better moral conditions for the prisoners.

Even more important, because of the fact that an important part of the area of the island itself is dependent upon it, is the construction, as recommended by the master in his report, hereto annexed, of a breakwater or riprap on the northeast corner of the island. At this point the shore is being washed away at the rate of ten feet or more a year, and already the sea is in close proximity to the north prison.

The other recommendations of the master, that a new refrigerating plant and a central heating plant be built, are strongly indorsed by me. The present maintenance of four distinct heating plants increases the fire risk and is an unnecessary waste of money and heating energy.

INDUSTRIES.

There are two industries carried on at the island, namely, that of cutting edgestones and the manufacture of overalls. Long-term men are engaged in these employments. The conditions under which these prisoners work are most favor-

able. These industries tend to inculcate the habit of working constantly, and teach concentration, a quality much needed by most of our inmates. We have introduced many modern and business-like methods during the year, and have increased the revenue for the county quite perceptibly.

INMATES.

A most important obligation, to my mind, is an extension of the work of providing employment for the prisoner on his discharge from confinement. We have devoted much attention to this work during the past year, with very satisfactory results.

We have transferred the distribution of gratuities from the institution to the main office in Boston. Instead of the conventional prison method of giving the discharged man money according to his length of service we are giving according to each applicant's need, always endeavoring to furnish board, lodging, tools and railroad tickets rather than cash, thereby eliminating the temptation which money presents to the discharged man.

It has been found advisable to discontinue the practice of allowing prisoners to receive articles from friends, and as a substitute the department provides such articles as are allowed to be ordered by the prisoner and paid for by him.

PERMITS TO BE AT LIBERTY.

The power to grant these permits is given to the Penal Institutions Commissioner under the Revised Laws, chapter 225, sections 118 and 119, as to minor offences, such as drunkenness, non-support, idle and disorderly conduct, night-walking, etc. Offences of a higher character can be paroled within six months of the expiration of the sentence by recommendation of the probation officer.

After receiving the petitions for release a thorough investigation is made into each individual case. An endeavor is made to place the responsibility for the future good conduct of the applicant on his relatives and friends, and unless some employment is open to him upon his release such application is as a rule denied. The good conduct of the prisoner at the island counts in his favor, and on his release he signs a pledge of reformation.

One of the hardships, not only of the present year but of all the years in the past, has been the fact that men committed because of their financial inability to pay a fine have been beyond the scope of permits to be at liberty. Out of

this a peculiar situation resulted. Men whom the courts had adjudged should be confined for a definite period of time could be released, while men whose presence on the island was the result simply of their inability to pay the fine, imposed for exactly similar offences, were compelled to be held for the full working out of such time. This resulted in very many cases in grave injustice. A bill was introduced in the Legislature in January to correct this situation and make the fine prisoners subject to the permits to be at liberty, and indications are that it will be enacted into law.

EMPLOYEES.

I recommend that the employees of this department be placed under the provisions of the civil service laws, thereby putting them on a level in this respect with the state penal institutions and all other city departments.

RELIGIOUS SERVICES.

The welfare of the prisoners has been devotedly cared for by the Rev. William J. Scanlan, S. J., the Catholic chaplain, and the Rev. George E. Stokes, the Protestant chaplain. Their constant spiritual ministrations to the sick and their kindly words of good cheer to all who seek them have been of great aid to the individual and collectively highly beneficial to the institution.

Mr. Martin Leftovitch has, as usual, been constant in conducting the Jewish services on their days of worship.

I have received during the past year loyal and efficient support from the employees of this department, and it is a pleasure to acknowledge and thank them for it.

Respectfully submitted,

VERNON V. SKINNER,
Commissioner.

SUFFOLK COUNTY HOUSE OF CORRECTION.

DEER ISLAND, BOSTON, MASS., February 1, 1909.

MR. VERNON V. SKINNER, *Penal Institutions Commissioner*,
32 Tremont street, Boston, Mass.:

DEAR SIR,— I respectfully submit the annual report of the Suffolk County House of Correction for the year ending January 31, 1909, with the usual statistical tables and a few suggestions as to the betterment of the institution.

The Deer Island plant represents a total valuation of \$1,378,729, of which \$380,629 is for land and \$998,100 is for buildings.

The stock of merchandise and general supplies on hand January 15 amounted to \$64,743.88.

During the year the men's department has manufactured 625 dozen of outer garments, 1,513 dozen articles of under-clothing, 234 dozen articles of bedding, etc., and 3,026 pairs of shoes and 624 pairs of slippers. The women's department has made 4,686 articles of clothing and 9,576 sheets, pillow-slips, towels, etc.

The value of agricultural products produced during the year are as follows:

Piggery	\$13,284 99
General farm products	24,656 11

In the industries department there has been cut $24,780\frac{7}{12}$ feet of edgestone, 22 large curb corners and 80 small curb corners, of which $18,147\frac{1}{12}$ feet of edgestone has been shipped. There is on hand 8,152 feet of edgestone, 23 large curb corners and 90 small curb corners. There have been manufactured $15,286\frac{4}{12}$ dozen overalls and 1,238 dozen coats.

Attention is called to the table which shows statistics concerning the hospital.

Forty-three thousand and twelve (43,012) patients have been treated in the out-patient department, this number including the total number of inmates seen at the daily sick calls at the three prisons as well as those who are seen at the hospital but not admitted. In addition to this each inmate was subjected to a physical examination on the afternoon of his arrival and was vaccinated the morning following.

I would again suggest the advisability of fitting up one or two padded rooms, so that we may better care for such insane patients as may be temporarily confined here.

I would also recommend that some provision be made for the more approved treatment of such tubercular prisoners as we are unable to transfer to Rutland — either by building a specially adapted, open-air ward or by building a veranda around one of the present wards, so that the patient may sleep in the open air, this being the proper treatment for such cases.

I earnestly desire to call your attention to the establishment of a central power plant; our steam plants are widely scattered, and the building of a central station would mean the saving of many tons of fuel and the saving in wages of about three hundred and ninety dollars (\$390) a month.

A cold storage plant should be installed and a system of modern telephones established in all departments of the institution. Our telephone system, if it can be called a system, is antiquated and totally unfitted for an institution of this character, where instant communication with different buildings is at times imperative.

Our wharf needs repairing, and a new, larger and modern drop should be built and the wharf strengthened.

I must also call to your attention the fact that the men's new prison must be rewired at a very early date.

An ambulance is a crying necessity, as the wagon we are now using is totally unfitted to take patients to the hospital. Four horses are urgently needed, as those we have are old and overworked.

The northeast corner of the island is being rapidly eaten away by the sea, and I would suggest that a riprap be laid to protect that end of the island.

You will notice in this report quite a change in the valuation of buildings. The figures given in former reports have been carried from year to year and were not a fair valuation of the numerous buildings. I caused the clerk to go over the different buildings and to give me his figures; afterward the assessors came down and went over the departments with the figures I had to submit to them, and in that way came to an entirely new valuation.

I have collected and paid to the City Collector six thousand three hundred thirty-two dollars (\$6,332), the amount of the fines for the year ending January 31, 1909.

The discipline of the institution is excellent, and my officers have given me good support. Thanking you and Mr. Carruth for many courtesies and suggestions, I am,

Respectfully yours,

JAMES H. CRONIN, *Master.*

REPORT OF THE CATHOLIC CHAPLAIN.

HOUSE OF CORRECTION,
DEER ISLAND, BOSTON HARBOR, January 1, 1909.

MR. JAMES H. CRONIN, *Master*:

DEAR SIR,—I respectfully submit my annual report as Catholic chaplain of the House of Correction, Deer Island.

My work of the past year has differed very little from that of previous years. The needs of the inmates seem to be very much the same from year to year. Every Sunday and holy-day I say Mass for the women at 6.30 a. m. and for the men at 8 a. m. At both services I give instructions and preach. The confessions of inmates are heard on the first, second and third Saturdays of the month, after supper.

The care of the sick and dying is a matter of special concern to me, and I am very pleased to say that the doctors of the hospital have notified me of every case where there was need of my spiritual ministrations. A chaplain in such an institution as this finds himself obliged to devote much time and thought to works of charity over and above the spiritual needs of the inmates. He is constantly appealed to by the unfortunate prisoners themselves to help along their release. The demands of wives and children are very frequent and no less urgent in behalf of an imprisoned husband or father. In my efforts to be of some assistance to those who appeared worthy I necessarily have been obliged to talk the cases over with you, Mr. Cronin, and I wish to take this occasion to acknowledge that very ready and willing service and co-operation given to me in such instances by yourself and your worthy deputy.

The work of Miss Berran in behalf of the women inmates while they are at the Island and after their release is especially worthy of mention.

My observations made in last year's report regarding the very satisfactory relations existing between officers and inmates I am very pleased to reaffirm this year. There is one other matter of which I feel I should make mention, and that is the imprisonment of simple drunkards with the habitual criminal in the same institution. Every day I am becoming more strongly convinced of the inadvisability of imprisoning the mere drunkard and the habitual criminal under the same roof. The habitual criminal may also be very much of a

drunkard; but the simple "drunk," as he is called, is frequently without any criminal propensities — his drunkenness is more or less of a disease and may considerably diminish under proper medical treatment. Indeed, a long sentence with accompanying forced sobriety frequently wakes a man up to the value of temperance. It is quite enough for the drunkard to have to fight the temptation to drink after his release from prison, but if, by association inevitable in such an institution as this, he has acquired a knowledge of the habitual criminal's methods he becomes the prey of a double demon—intemperance and crime. While the disassociation of these two classes may not bring about all the reformation hoped for, it is my firm conviction that it would help the work of reformation very appreciably.

I am, sir,

Respectfully yours,

WILLIAM J. SCANLAN, S. J.

REPORT OF THE PROTESTANT CHAPLAIN.

DEER ISLAND, BOSTON HARBOR.

Mr. JAMES H. CRONIN, *Master*:

DEAR SIR,— I take pleasure in presenting my first annual report. My appointment dates from the first day of August, 1908, but during much more than the preceding half-year it was my privilege to render considerable service on behalf of the former chaplain, Rev. William B. Toulmin, who was in broken health. My report, therefore, covers the past year.

Mr. Toulmin was chaplain of this institution for eighteen years, and the efficiency and faithfulness of his services endeared him to all and received appropriate recognition upon his retirement, when those in authority constituted him chaplain emeritus. He is now spending the quiet evening of his life surrounded by loved ones and with his aged companion at North Dighton, Mass., awaiting the touch of the unseen hand to guide him to the better country.

Public worship is held every Sunday afternoon for men and women separately in their respective chapels. The attendance this year has been greatly increased and the increase steadily maintained. I think I may modestly infer that the services have been interesting and I trust helpful and suggestive in all that is good in the moral and spiritual realm. The mightiest army is the army of ideas — good or bad. “As a man thinketh in his heart so is he.”

I have not undertaken to conduct all the services personally. It is possible that the wisdom of this course would be doubtful. I have considered myself responsible for the character of the meetings and have enlisted ministers of different denominations to officiate frequently. This has contributed variety in personality and voice, in thought and in style.

Only essentials have had place in the addresses and sermons and indeed in all of our work. The Christian teachings broadly held by all Christians in common have alone been emphasized. There has been no uncertain note of insistence on the moral law, the evils of intemperance and every form of vice. Total abstinence from intoxicants and drugs is the standard held up for every individual as the only safe course. The one aim has been to persuade men and women to live a godly, clean, sober and honest life and to seek divine aid as its inspiration. In

all this (to quote the sentiment of an eminent leader), "I desire a league offensive and defensive with every soldier of Jesus Christ."

I have each week met any who wished to interview me, and have visited those in the hospital and performed such special duties as have arisen from time to time. I have been able to place a number in homes after their release and confess considerable gratification in the fact that thus far not one of these has returned to this nor been sentenced to any other institution. I am not disposed to belittle the discouragements, but am satisfied that a much larger number could be aided to a praiseworthy and useful citizenship who now drift back to former vices and evil influences, but there is inadequate method and frequently no place on hand for their betterment. There is usually a chord in the lowliest and most degraded person that will respond to the touch of the fingers of the musician who knows how to bring it forth. Society has evolved upward to the present high standard in dealing with the depressed and the criminal classes and such unfortunates. Perfection is far from reached, however, and assuredly "the best is yet to be." Grateful for the elevation to which our fathers have brought us, it should be our endeavor to make our contribution to the ideal in view.

I have looked after a number of interests for inmates in such cases as seemed right and wise.

It is a pleasure to note the scrupulous cleanliness of the buildings, the sufficiency and good quality of the food and the apparent harmony among the officers, physicians, nurses and matrons.

I have a warm appreciation for the interest our commissioner, Mr. Vernon V. Skinner, has manifested in aiding me in accomplishing any good possible and according me all possible freedom of action consistent with the circumstances.

I have equal reason to thank you likewise for your co-operation and for many courtesies and considerations that have contributed to my success and comfort.

Yours very respectfully,

GEORGE E. STOKES.

Statistical Tables Consolidated.

POPULATION.	1904.	1905.	1906.	1907.	1908.
Number of inmates beginning fiscal year.....	1,509	1,493	1,204	991	1,099
Number received during year.....	11,566	9,593	7,873	8,649	11,624
Number discharged during year.....	11,582	9,882	8,086	8,541	11,174
Number at end of fiscal year.....	1,493	1,204	991	1,099	1,549
Daily average attendance (<i>i. e.</i> , number inmates actually present) during fiscal year.....	1,582	1,291	1,029	1,031	1,463
Average number officers and employees during fiscal year.....	116	112	111	109	114

Consolidated Financial Statement.

EXPENDITURES.	1904.	1905.	1906.	1907.	1908.
CURRENT EXPENSES:					
Salaries and wages.....	¹ \$62,210 17	² \$61,338 85	³ \$60,765 50	⁴ \$63,684 87	⁵ \$68,552 62
Clothing.....	14,039 70	11,993 34	8,832 29	11,789 61	15,321 02
Subsistence (inmates)	58,249 21	49,055 24	36,609 02	40,698 15	59,649 89
Subsistence (officers).....	19,041 46	17,583 55	16,600 52	16,348 05	15,906 64
Ordinary repairs and replacements.....	5,873 26	7,251 07	7,611 86	7,918 96	5,479 82
Office, domestic, outdoor expenses.....	39,415 89	39,704 88	41,023 92	43,373 37	34,859 97
Totals.....	\$198,829 69	\$186,927 43	\$171,443 11	\$179,706 34	\$199,769 96
Per capita cost subsistence (inmates):					
Per year.....	\$36 82	\$37 99	\$35 58	\$39 47	\$40 77
Per week.....	71	73	69	75	78
Per capita cost subsistence (officers):					
Per year.....	164 15	156 99	149 55	149 98	139 53
Per week.....	3 15	3 02	2 87	2 88	2 68
EXTRAORDINARY EXPENSES:					
New buildings land.....	\$85,278 63	\$7,744 93	\$1,107 35	\$3,859 18	\$959 18
Permanent improvements.....				45,858 94	5,131 61
Totals	\$85,278 63	\$7,744 93	\$1,107 35	\$49,718 12	\$6,090 79
Grand Totals.....	\$284,108 32	\$194,672 36	\$172,550 46	\$229,424 46	\$265,860 75

¹ Includes \$4,368.33 for industries. ² Includes \$4,585 for industries. ³ Includes \$4,085 for industries.⁴ Includes \$4,106.67 for industries.⁵ Includes \$4,185 for industries.

HOSPITAL STATISTICS.

Patients in hospital January 31, 1909:

House of Correction	72	
Observation Hospital	11	
		83

Admitted during the year:

House of Correction	1,216	
Observation Hospital	304	
		1,520
		1,603

Discharged during the year:

House of Correction	1,185	
Observation Hospital	279	
		1,464

Died during the year:

House of Correction	22	
Observation Hospital	19	
		41
		1,505

Remaining in hospital January 31, 1909:

House of Correction	81	
Observation Hospital	17	
		98

Daily average for the year:

House of Correction	72	
Observation Hospital	17	
		89

Courts from which Committed.

	Males.	Females.	Total.
Municipal Court (Central).....	4,141	831	4,972
Roxbury District.....	704	72	776
South Boston District.....	1,230	49	1,279
Charlestown District.....	1,133	53	1,186
Chelsea Police Court.....	858	30	888
Superior Criminal.....	676	87	763
Dorchester District.....	574	5	579
East Boston District.....	332	33	365
Brighton District.....	179	5	184
West Roxbury District.....	196	9	205
United States Circuit.....	8	.....	8
Otherwise committed.....	77	22	99

Number of Persons Committed for Non-payment of Fine, Classified by Amount of Fine and by Offence Group.

	AMOUNT OF FINE.				Total.
	\$5 or less.	More than \$5 and less than \$10.	More than \$10 and less than \$20.	More than \$20.	
Drunkenness.....	3,132	472	244	.....	3,848
All other.....	338	282	210	129	959
					4,807

Five-year Table on Social Conditions of Inmates Committed.

	1904.	1905.	1906.	1907.	1908.
Color (white):					
Males.....	9,372	7,822	6,426	7,218	9,857
Females.....	1,465	1,110	869	826	1,097
All other colors:					
Males.....	260	223	180	198	251
Females.....	77	77	58	53	99
Married:					
Males.....	1,706	1,171	1,735	1,928	2,333
Females.....	776	647	487	496	557
Single:					
Males.....	6,926	5,874	4,871	5,488	7,775
Females.....	763	540	440	383	639
Could read and write:					
Males.....	8,679	7,231	5,946	6,646	9,175
Females.....	1,188	954	711	718	1,031
Could read only:					
Males.....	42	16	27	19	41
Females.....	29	10	3	20	27
Could neither read nor write:					
Males.....	911	798	632	751	892
Females.....	325	223	213	141	138
Born in Massachusetts:					
Males.....	3,864	3,387	2,784	3,118	4,126
Females.....	426	331	263	273	369
Born in United States other than Massachusetts:					
Males.....	1,226	972	760	861	1,105
Females.....	195	450	134	118	181
Foreign born:					
Males.....	4,542	3,686	3,062	3,437	4,877
Females.....	921	70	530	488	646

Discharges, Transfers and Deaths.

	Males.	Females.	Total.
Expiration of sentence	8,524	949	9,473
Permit of commissioner	441	68	509
Permit of Prison Commissioner	4	.....	4
Permission of State Board of Charities	9	10	19
Pardoned by Governor	3	.....	3
Pardoned and fine paid	1	.....	1
Payment of fines	627	28	655
Bailed and expiration of sentence	4	.....	4
Died	13	5	18
Order of court	46	6	52
Escaped	2	.....	2
Expiration of sentence and permit of commissioner	2	.....	2
Error of court	1	.....	1
Transferred to other institutions	122	3	125

Offences for which Committed.

COMMITTED AGAINST THE PERSON.	Males.	Females.	Total.
Abuse of a female child	4	.....	4
Assault	448	11	459
Aggravated assault	5	.....	5
Attempt at larceny from the person	20	.....	20
Confining and imprisoning a person	1	.....	1
Indecent assault	2	.....	2
Larceny from the person	99	11	110
Making threats	13	.....	13
Manslaughter	1	.....	1
Poisoning food with intent to kill	2	.....	2
Robbery	13	.....	13
Totals	608	22	630

Offences for which Committed.—*Continued.*

COMMITTED AGAINST PROPERTY.	Males.	Females.	Total.
Attempt at larceny.....	30	10	40
Attempt to break and enter.....	5	.....	5
Attempt to pass counterfeit money.....	1	.....	1
Breaking and entering.....	97	.....	97
Forgery.....	135	10	145
Fraudulent conveyance.....	.....	2	2
Fraudulently obtaining board at a boarding house.....	1	.....	1
Larceny.....	1,076	53	1,129
Maliciously burning a building.....	2	.....	2
Malicious injury.....	43	.....	43
Receiving stolen goods.....	16	.....	16
Stealing United States property.....	1	.....	1
Trespass.....	65	.....	65
Unlawful appropriations.....	9	.....	9
Totals.....	1,359	66	1,425.
COMMITTED AGAINST PUBLIC ORDER AND DECENCY.			
Adultery.....	5	1	6
Altering a building without a permit.....	3	.....	3
Assault and interfering with a railroad conductor.....	1	.....	1
Attempt to rescue a prisoner.....	1	.....	1
Being a common drunkard.....	3	.....	3
Being a common nightwalker.....	.....	65	65
Being a common railer and brawler.....	.....	1	1
Being a tramp.....	9	.....	9
Being a vagabond.....	3	.....	3
Being a vagrant.....	209	5	214
Being armed with a billy when drunk.....	1	.....	1
Carrying burglar's tools with intent to use.....	1	.....	1
Causing a bonfire.....	6	.....	6
Collecting junk without a license.....	1	.....	1
Committing an unnatural act.....	3	.....	3
Creating a disturbance in a public conveyance.....	4	.....	4
Cruelly beating a horse.....	1	.....	1
Delivering morphine to a prisoner in State Prison....	1	.....	1
Discharging fire-arms.....	1	.....	1
Disorderly conduct on a railroad car.....	1	.....	1

Offences for which Committed.—*Continued.*

COMMITTED AGAINST PUBLIC ORDER AND DECENCY.	Males.	Females.	Total.
Disturbing a public meeting.....	1	.....	1
Disturbing the peace.....	6	2	8
Drunkenness.....	7,380	935	8,315
Extinguishing a street lamp.....	1	.....	1
Fornication.....	49	47	96
Gaming.....	8	.....	8
Having in his possession brass knuckles.....	1	.....	1
Having in his possession obscene pictures.....	1	.....	1
Idle and disorderly.....	96	24	120
Illegally voting.....	1	.....	1
Indecent exposure.....	18	.....	18
Keeping a disorderly house.....	11	15	26
Keeping an unlicensed dog.....	2	.....	2
Lewd and lascivious cohabitation.....	12	2	14
Loitering at a railroad station.....	18	.....	18
Maintaining an opium resort.....	1	.....	1
Maintaining a liquor nuisance.....	1	.....	1
Making an affray.....	2	.....	2
Mutilating a public record.....	1	.....	1
Non-support.....	93	.....	93
Obstructing a public street.....	2	.....	2
Operating an automobile while under the influence of liquor.....	1	.....	1
Peddling without a license.....	4	.....	4
Perjury.....	3	.....	3
Polygamy.....	2	.....	2
Practicing medicine without a license.....	1	.....	1
Rescuing a prisoner from an officer.....	3	.....	3
Ringing a false alarm.....	1	.....	1
Selling medicine containing cocaine.....	1	.....	1
Selling obscene pictures.....	2	.....	2
Stealing a ride.....	1	.....	1
Unlawfully carrying concealed weapons.....	30	.....	30
Unlawfully peddling.....	5	.....	5
Unlawfully selling intoxicating liquors.....	23	10	33
Unlawfully spitting.....	19	.....	19
Unlawfully taking and driving a horse.....	1	.....	1
Using obscene language.....	1	.....	1

Offences for which Committed.— *Concluded.*

COMMITTED AGAINST PUBLIC ORDER AND DECENCY.	Males.	Females.	Total.
Using profane language.....	4	1	5
Violating the city ordinances.....	8	.....	8
Violating the junk laws.....	2	.....	2
Violating the Lord's Day.....	1	.....	1
Violating the town ordinances.....	1	.....	1
Violating the park rules.....	8	.....	8
Violating the rules of the Board of Aldermen.....	1	.....	1
Walking railroad tracks.....	59	.....	59
Totals.....	8,141	1,108	9,249

Number of Times Prisoners Committed during the Year Have Been Committed to the House of Correction.

	1904.			1905.			1906.			1907.			1908.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
First.....	3,405	475	3,880	2,744	330	3,074	2,253	264	2,517	2,450	265	2,715	3,804	423	4,247
Second.....	1,375	199	1,574	1,091	173	1,264	970	121	1,091	1,026	147	1,173	1,560	199	1,759
Third.....	873	168	1,041	700	113	813	580	84	664	671	78	749	878	120	998
Fourth.....	647	109	756	654	92	746	395	66	461	483	57	540	593	77	670
Fifth.....	422	80	502	437	73	510	305	56	361	393	43	436	479	54	533
Sixth.....	365	75	440	332	59	391	248	53	301	297	39	336	395	46	441
Seventh.....	310	55	365	270	44	314	220	37	257	225	32	257	300	34	334
Eighth.....	264	52	316	220	45	265	187	36	223	173	33	206	248	28	276
Ninth.....	197	40	237	176	41	217	153	28	181	181	25	206	190	30	220
Tenth.....	185	32	217	165	28	193	146	24	170	162	17	179	183	26	209
Eleventh.....	161	33	194	35	18	53	117	20	137	139	17	156	141	14	155
Twelfth.....	134	21	155	125	12	137	109	21	130	116	13	129	118	17	135
Thirteenth to hundred and thirty-first	1,294	203	1,497	1,096	159	1,255	923	117	1,040	1,100	113	1,213	1,219	28	1,347

Ages of Prisoners Committed.

	1904.			1905.			1906.			1907.			1908.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 20 years.....	322	12	334	219	2	221	176	8	184	236	11	247	378	11	389
20 to 29 years.....	1,885	379	2,264	1,677	262	1,937	1,393	216	1,609	1,577	216	1,793	2,177	330	2,507
30 to 39 ".....	3,261	565	3,825	2,699	470	3,169	2,167	313	2,480	2,386	302	2,688	3,100	427	3,527
40 to 49 ".....	2,458	361	2,819	2,015	293	2,308	1,724	236	1,960	1,907	240	2,147	2,664	269	2,933
50 to 59 ".....	1,224	153	1,377	1,020	115	1,135	795	104	899	947	80	1,027	1,286	120	1,406
60 to 69 ".....	425	60	485	350	39	389	292	37	329	314	22	336	432	36	468
70 to 79 ".....	55	13	68	64	6	70	54	13	67	43	8	51	65	3	68
80 to 89 ".....	2	.....	2	1	.....	1	5	.....	5	5	.....	5	5	.....	5
90 to 99 ".....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	1





ANNUAL REPORT
OF THE
PRINTING DEPARTMENT

FOR THE
YEAR ENDING JANUARY 31, 1909.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,

Mayor of the City of Boston:

SIR, — In accordance with chapter 3, section 24, of the Revised Ordinances of 1898, I herewith submit the report of the Printing Department for the year beginning February 1, 1908, and ending January 31, 1909.

During the year just closed an earnest effort has been made to place the Printing Department on a paying basis by the introduction of the ordinary methods pursued by private concerns in the same line of business. It is not the purpose of this report to go deeply into criticism of the former methods of management of the plant or to make comparisons with a view to showing the lack of business methods in its operation formerly. The shortcomings of the former administration have been made the subject of investigation by experts, employed by Mr. Laurence Minot during his incumbency as Acting Superintendent in January and February, 1908, and also by the Boston Finance Commission. The results of these investigations are incorporated in the report of the experts to the Superintendent of Printing (Document 32, 1908), and in the Finance Commission's communication

to the Mayor and the City Council, relating to the Municipal Printing Plant, dated December 14, 1908.

It was found that one of the serious needs of the department was a proper mechanical typesetting equipment. The character of the city's work is such that typesetting machines should have been introduced years before, but this had never been done. After thorough investigation it was decided to equip the plant with the Lanston Monotype Company's machines, and these were installed early in April, 1908. The department had no money with which to pay for these machines, nor was it deemed possible to obtain an appropriation for that purpose. Therefore an arrangement was made with the manufacturers whereby the city obtained the machines on ninety days' trial, at the end of which time such savings had been made as to make possible the payment of reasonable monthly installments from "operating expenses" until the purchase price had been paid.

The amount of printing stock on hand at the beginning of 1908 was found to be about three times as large as was necessary. Enough printing ink was on hand to last the department several years. As some of the stock and most of the ink had not been paid for, concerns furnishing it were induced, under the circumstances, to take it back.

The introduction of competition in stock purchases has resulted in the department's being able to obtain as favorable prices as any outside concern. Very considerable savings have resulted under this head.

One of the features of the Printing Department was a bindery. In spite of the fact that the pay roll for this bindery was approximately \$4,000 a year, the cost of binding done by contract outside of the department ran from \$20,000 to \$25,000 annually. By introducing competition in obtaining binding by outside contract, it was found practicable to get the work done for half what it had cost heretofore.

Nearly if not quite all of this outside binding was done by one firm. Since other concerns were willing to do the work much more cheaply, most of the city's work at once sought new channels. The result was that the concern in question ceased to do business in about three months.

So much of the binding as was done inside this department was done at unreasonably high cost. Folding in this department was hand work. Such private concerns as do this work by hand pay folders by the piece. This department, however, employed unskilled folders, and paid weekly salaries far in excess of the average earnings of the most skillful piece-paid employees of private concerns. On July 15, 1908, the

city's binding department was abolished. The waste which had existed is revealed by the fact that in the week following the abolition of the bindery the work which it would have performed cost, by contract, less than \$10. The bindery salary list at the time of its abolition totaled \$50 per week.

A commentary on the cost of binding is afforded by comparison of the total figures for 1907-8 with those of the last year:

1908-9.	1907-8.	Decrease.
\$10,659.48	\$20,264.01	\$9,604.53

a reduction of nearly 50 per cent.

During the year the department has been removed from the old location at 152 Purchase street to a modern fire-proof building at 251 Causeway street. Since the city does not insure its property, it would seem to be the duty of department heads to seek locations as nearly fireproof as possible. In the new quarters the department is assembled on one floor, and the material and machinery so arranged as to reduce the amount of floor space required, while materially increasing the productive capacity of the plant. The cost of removal was paid from department earnings. The rent for the new quarters is only \$3,000 annually, instead of \$4,900, as formerly. The latter figure included power to the amount of \$800 per annum. The machines in the department are now all equipped with individual electric motors, which results in much more flexibility of operation and independence of control, while costing much less than before. Power and light, including gas, in the old quarters totaled about \$160 per month, and in the new quarters has averaged about \$107 monthly.

An earnest attempt has been made to reduce to a minimum the effect of outside influences, political or otherwise, on the affairs of the Printing Department. Employees have been selected solely for their merits as workmen, and the hiring and discharging of help has been only in response to the department's business needs.

The City of Boston to-day owns a printing office which will bear comparison with that of any private concern. It is completely equipped with modern machinery, and is organized and arranged especially with a view to the handling of the city's work. The work is produced at a low cost, and as it stands to-day the city's plant is a paying enterprise.

Our total receipts for the year, as is shown in the table below, were \$180,450.70, and the total of all expenses was \$141,889.35, showing an operating profit of \$38,561.35. Additions to the plant have been made to the amount of .

\$25,828.02, and extraordinary expenses for moving, auditing, etc., to the amount of \$5,117.71, have also been paid. The actual cost of operation was \$119,905.99. The total operating expense for the year 1907-8 was \$180,049.93. The total expense of operation for the year just closed — \$119,905.99 — thus shows a decrease in actual operating expense of \$60,143.94. This latter figure represents the actual saving to the city in cost of operation of the Printing Department for the year.

The department owes no money, and is in excellent physical condition. With the enormous volume of work on hand and in prospect an even better showing can be predicted for the year to come.

Respectfully submitted,

JAMES H. SMYTH,

Superintendent of Printing.

FINANCIAL STATEMENT.

The following is a statement of the operating expenses and documents, etc., of the Printing Department from February 1, 1908, to February 1, 1909:

PRINTING DEPARTMENT, OPERATING EXPENSES.

Revenue from printing and postage uncollected Feb. 1, 1908, \$19,820 19

Department.	Printing.	Postage.	
Art	\$9 18		
Assessing	2,269 34	\$193 22	
Auditing	229 13	365 00	
Building	711 60	292 12	
Bath	394 58	33 50	
Bridge	722 52	145 12	
Northern avenue and Sleeper street	78 93	10 52	
Board of Aldermen, Contingent Fund	176 77		
City Clerk	357 33	161 00	
Cemetery	480 56	108 50	
City Messenger	319 89	223 00	
Collecting	2,082 10	3,451 20	
Clerk of Committees	88 59	142 88	
City Council, Incidental Expenses, City Council Proceedings	899 25	75	
City Council Proceedings	7,217 53		
Common Council, Contingent Fund	98 31	150 00	
Consumptives' Hospital	1,278 13	202 28	
Engineering	396 78	5 26	
Election	24,760 74	432 78	
Finance Commission	3,714 38	51 87	
Fire	1,557 02	70 00	
Franklin Union	114 07	6 00	
Health	3,438 21	2,537 62	
Hospital	3,595 62	88 68	
Institutions:			
Pauper Institutions:			
Office Expenses	253 35	80 24	
Boston Almshouse and Hospital, Long Island	436 95	154 44	
Charlestown Almshouse	56 00		
Penal Institutions:			
Office Expenses	251 16	154 00	
Deer Island	297 56	259 00	
Trustees for Children:			
Parental School	53 97		
Placing Out and Office Expenses	98 99		
Rainsford Island	18 74		
Boston Insane Hospital	162 79		
Institutions Registration	193 51	101 50	
Library	123 63		
Licensing Board	643 55		
Law	5,117 00	101 00	
Carried forward	\$62,697 76	\$9,521 48	\$19,820 19

Department.	Printing.	Postage.	
<i>Brought forward</i>	\$62,697 76	\$9,521 48	\$19,820 19
Lamp	239 45	64 14	
Mayor	591 42	183 40	
Music	294 16	48 22	
Market	74 98	6 00	
Overseers of Poor	323 72	101 00	
Public School Teachers' Retirement Fund	5 58		
Police	5,217 76		
Signal Service	172 38		
House of Detention	28 25		
Registration	16,148 54		
Public Buildings	450 98	95 24	
Public Grounds	307 01	71 50	
Park	666 46	249 30	
Public Celebrations	30 33	10 00	
Printing Documents, etc.	30,946 37		
Publicity Bureau	83 87	61 44	
Registry	2,626 99	921 91	
Street:			
Paving Division	2,679 71	809 10	
Ferry Division	1,017 57	8 00	
Sanitary Division	1,490 67	104 60	
Sewer Division	1,872 78	376 17	
Street Cleaning and Watering	497 01		
Central	175 22	8 00	
Street Laying-Out	405 00	124 00	
Soldiers' Relief	156 99	69 00	
School	6,760 44		
Schoolhouse	947 11	584 24	
Land and Buildings	1,441 72		
Supply	508 92	327 36	
Statistics	4,728 55	144 00	
Sinking Fund	443 46		
Sewerage Works	343 68		
Treasury	222 88	126 20	
Water:			
Income	1,808 79	233 20	
Distribution	793 82	24 00	
Commissioner's Office	251 81	105 38	
Wire	355 00	102 00	
Weights and Measures	162 75	20 00	
County of Suffolk:			
Land Court	313 95		
Superior Criminal Court	975 73	20 00	
Superior Court	37 53		
Probate Court	139 52		
Medical Examiner	144 15	10 62	
Municipal Court, Jamaica Plain	143 12		
Boston Traveler Company	298 50		
Henry J. Williams	6 33		
<i>Waste Paper.</i>			
P. H. Graham	133 22		
John A. DeVito	12 16		
	\$150,174 10	\$14,529 50	164,703 60
Total receipts			
			\$184,523 79

EXPENDITURES FROM FEBRUARY 1, 1908, TO FEBRUARY 1, 1909.

Accounts unpaid February 1, 1908] \$16,076 28

Pay roll:

February	\$8,476 02	
March	5,903 40	
April	5,940 02	
May	7,576 24	
June	7,424 15	
July	6,017 51	
August	7,075 58	
September	5,609 01	
October	6,782 76	
November	5,558 33	
December	5,434 20	
January	7,122 50	
Extra clerical	88 04	
		\$79,007 76
Paper stock		10,376 27
Binding, ruling, etc.		9,922 96
Rent		3,935 40
Electros, engraving, etc.		2,246 95
Monotype metal		1,535 43
Outside printing and index cards		1,148 32
Power and lighting		950 88
Press room supplies		834 40
Interest on machines		764 89
Insurance on machines		714 15
Machine room expenses		442 57
Sundries miscellaneous expenses, ...		240 44
Repairs		233 84
Telephone		232 42
Teaming		188 84
Stationery		170 31
Cleaning offices		144 51
Towels, soap, etc.		115 60
Type expense		85 67
Water rates		82 50
Car fares		61 38
		113,435 49

Extraordinary Expenses.

Auditing accounts, }		
Inventory, }		\$1,969 47
Installing card system, }		
Moving expenses		2,713 09
		4,682 56
Drafts for postage		16,000 00

Additions to Plant.

Monotype machines	\$21,456 23
New type	431 39
Furniture	179 00
	\$22,066 62

Cr.

Old material sold	1,019 46	
		21,047 16

Total expenditures \$171,241 49

Total receipts paid February 1, 1909 (see page 6)	\$184,523 79
Total expenditures paid February 1, 1909 (see page 7)	171,241 49
Balance on hand February 1, 1909	<u>\$13,282 30</u>

Printing Department, Documents, etc.

Appropriations	<u>\$36,794 74</u>
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Expenditures.

Accounts unpaid February 1, 1908	\$2,996 19
Printing documents, etc., paid to February 1, 1909	30,946 37
Superintendent's salary	2,843 63
Stationery, Clerk of Common Council	8 55
	<u>\$36,794 74</u>

SUMMARY OF RECEIPTS AND EXPENDITURES OF PRINTING DEPARTMENT,
OPERATING EXPENSES, FROM FEBRUARY 1, 1908, TO FEBRUARY 1,
1909, INCLUDING REVENUE UNCOLLECTED AND EXPENDITURES NOT
PAID.

RECEIPTS.

Revenue from printing and postage paid to February 1, 1909, ...	\$164,558 22
Waste paper	145 38

Revenue uncollected as follows:

	Printing.	Postage.
Art	\$6 34	
Assessing	163 97	
Auditing	44 72	
Building	370 45	\$88 14
Bath	31 54	
Bridge	49 13	10 67
Board of Aldermen, Contingent Fund	4 98	
City Clerk	146 62	
Cemetery	49 53	
City Messenger	436 48	42 00
Collecting	612 07	500 00
Clerk of Committees	96 82	
City Council, Incidental Expenses	7 61	
City Council Proceedings	722 33	
Common Council, Contingent Fund	11 78	
Consumptives' Hospital	106 91	34 74
Engineering	10 34	
Election	118 13	35 31
Fire	146 37	14 00
Franklin Union	69 03	13 00
Health	330 99	582 28
Hospital	1,123 39	20 00
Institutions:		
Pauper Institutions:		
Office	88 36	25 24
Boston Almshouse and Hospital, Long Island	62 14	51 44
Charlestown Almshouse	8 50	
Carried forward	<u>\$4,818 53</u>	<u>\$1,416 82</u> <u>\$164,703 60</u>

PRINTING DEPARTMENT.

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	Printing.	Postage.	
<i>Brought forward</i>	\$4,818 53	\$1,416 82	\$164,703 60
Penal Institutions:			
Office	33 60	20 00	
Deer Island	163 00	29 00	
Trustees for Children:			
Parental School	13 29		
Placing Out and Office Ex-			
penses	24 60		
Institutions Registration	19 34	21 00	
Library	277 16		
Licensing Board	653 73		
Law	113 84	20 00	
Lamp	24 15		
Mayor	250 45	51 08	
Mayor, Public Celebration	20 70	3 25	
Music	152 21	13 00	
Market	10 37		
Overseers of Poor	2 68	40 00	
Police	1,161 79		
Signal Service	100 35		
House of Detention	8 84		
Public Buildings	55 91	10 00	
Public Grounds	20 20	10 00	
Park	28 07	84 96	
Printing Documents, etc.	1,048 27		
Registry	78 79	216 68	
Street:			
Paving	471 54	54 20	
Sanitary	59 17	10 00	
Sewer	175 49	67 52	
Street Cleaning and Watering	181 26		
Ferry	206 07		
Central	97 98		
Street Laying-Out	451 25	40 00	
Soldiers' Relief	185 97	20 00	
School	331 69		
Schoolhouse	251 69	46 00	
Land and Buildings	120 84		
Supply	185 96		
Statistics		24 00	
Treasury	16 20	5 00	
Water:			
Income	360 04	40 00	
Distribution	29 38	6 00	
Commissioner's Office	137 91	8 00	
Wire	434 53	20 00	
Weights and Measures	283 82		
County of Suffolk:			
Superior Criminal Court	139 31	10 00	
Superior Court	24 25		
Probate Court	36 29		
Medical Examiner	8 33		
Municipal Court, Jamaica Plain, ...	45 56		
Land Court	128 64		
<i>Waste Paper.</i>			
John A. DeVito	17 55		
	\$13,460 59	\$2,286 51	15,747 10
Total receipts			\$180,450 70

EXPENDITURES.

Expenditures paid up to February 1, 1909 (see page 7) . . \$113,435 49

Unpaid accounts to February 1, 1909, as follows:

Stock	\$2,527 03
Binding, ruling, etc.	2,125 53
Rent	808 54
Monotype metal	342 29
Power and lighting	317 82
Electros, engraving, etc.	309 01
Outside printing and filing cards	304 83
Pressroom supplies	102 60
Sundries, miscellaneous expenses	98 14
Teaming	52 20
Water rates	30 45
Stationery	27 43
Cleaning offices	25 00
Towels, soap, etc.	16 82
Car fares	11 92
Telephones	11 77

\$7,111 38

Ink bought against amount due from George

H. Morrill 66 25

\$7,177 63*Cr.*

Pay roll accrued, 1908	\$2,244 23
Binding charged 1908	1,389 00
Difference on binding charged 1907	1,061 00
	4,694 23

\$2,483 40

Stock on hand February 1, 1908, \$7,989 41

Stock on hand and unfinished
work February 1, 1909:

Paper stock and ink	\$1,403 30
Metal	1,500 00
Unfinished work	1,099 01

4,002 31

Decrease in stock 3,987 10

6,470 50*Extraordinary Expenses.*

Paid to February 1, 1909	\$4,682 56
Unpaid to February 1, 1909:	
Moving expense	435 15

5,117 71

Expenditures	\$125,023 70
Postage purchased	16,864 45
Rebates on printing	1 20

Total expenditures \$141,889 35

PLANT.

Paid to February 1, 1909 (see page 7)		\$21,047 16
Unpaid to February 1, 1909:		
New type	\$1,335 65	
Furniture	109 75	
Motors	2,316 00	
	<u>3,761 40</u>	
		\$24,808 56
	<i>Cr.</i>	
Old material		2,111 29
		<u>\$22,697 27</u>
Plant February 1, 1908		37,389 86
		<u>\$60,087 13</u>
Book value, material discarded		14,938 46
		<u>\$45,148 67</u>
Value of plant February 1, 1909		<u>\$45,148 67</u>
Total receipts (see page 9)	\$180,450 70	
Total expenditures (see page 10)	141,889 35	
	<u>\$38,561 35</u>	
Gain on operations for year		<u>\$38,561 35</u>



ANNUAL REPORT
OF THE
PUBLIC BUILDINGS DEPARTMENT
FOR THE YEAR 1908-1909.

BOSTON, February 1, 1909.

HON. G. A. HIBBARD,
Mayor of the City of Boston:

SIR,—In accordance with section 24, chapter 3, of the Revised Ordinances of 1898, I beg to submit the following as the annual report of the Public Buildings Department for the year ending January 31, 1909.

My appointment as Superintendent of Public Buildings having been confirmed by the Board of Aldermen, I assumed charge of this department on January 29, 1908.

This department has the care and custody of the ambulance station, South Boston; new municipal building, Upham's Corner; the new city building at Codman square, Dorchester; city building, Washington and Richmond streets, Dorchester; Thomas Street and Poplar Street Schoolhouses and Curtis Hall; of all buildings in use for city offices, market purposes, halls for public meetings and the several county buildings; also hired buildings or parts of same used for city offices, county purposes, wardrooms, armories, etc.

It has been my purpose to administer the affairs of the department on a strictly business basis, which necessitated the suspension of all unnecessary employees and the introduction of a competitive system of proposals on repair and alteration work. It is a fact that the efficiency of the service

rendered has improved even after this reduction in the working force. The total pay rolls of the department on February 1, 1908, showed an annual expenditure of \$107,204.04, and on February 1, 1909, was \$75,339.80, or a yearly saving in salaries and wages of \$31,864.24.

The appropriation of this department for general expenditures for the past year was \$200,000, and the expenditures of same amounted to \$210,890.38, showing the excess of expenditures over appropriation to be \$10,890.38, but against this must be charged the amount of \$10,536.20 of old bills carried over from the previous administration and paid for from this appropriation, and also other bills amounting to several hundred dollars which were contracted for by my predecessor. Had it not been for these several items my appropriation for the year would not have been exceeded.

With the exception of a few emergency cases on repair work the competitive basis of obtaining estimates on proposed work has been followed, and while it is not possible to figure the exact amount saved on the work done as compared with past years, I am satisfied that it would amount to several thousand dollars.

The department has maintained wardrooms for public meetings, etc., in the various wards of the city at an annual cost of about \$12,500, which, to my mind, is extravagant, and I have arranged to discontinue the use of all hired quarters used as wardrooms as soon as the lease on each expires. The quarters were hired and used mostly for the political advancement of individuals or parties. The city received as a fee for a hall for a meeting the sum of \$2, and was obliged to pay for the same, in some instances, as high as \$40.

The cost of heating and lighting the building at No. 11 Wareham street, which is used for offices of the Wire Department, electricians of the Schoolhouse Department, etc., during the year of 1907, was \$4,017.83, and by the suspension of one engineer and three firemen and by arranging to obtain heat for the building from a private adjoining plant and the purchase of electricity direct from the Edison Electric Illuminating Company I have reduced the maintenance of this building by an annual saving of \$2,567.83.

Previous to June, 1908, it was the custom in this department to advertise and contract for coal every three months for the several departments of the city and county not otherwise provided for, which included the Public Buildings, County Buildings, Fire, Police, Library, Park, Bath, Health, Cemetery, Public Grounds, Overseers of the Poor, Market,

Election and Schoolhouse Departments. Requisitions were made by each department as needed; the quantity and quality of coal was weighed, inspected and certified to by an employee of this department. This work is now being cared for by the Supply Department.

The Curtis Hall building, which was used as a branch library and also let to various parties for dancing, was badly damaged by fire on the morning of December 15, 1908, after having been used on the night previous for a dancing party.

The thirty-one public tower clocks located in various parts of the city, the care of which was transferred to this office from the Fire Department in May, 1907, were transferred back to the Fire Department on November 11, 1908, as it was found that the care of same could be more economically and better carried on by the said department.

The following buildings or parts of same were hired for municipal purposes:

For Offices.

Estates numbered 37, 62-64 Pemberton square; Rooms 414-416, 730-742, 801-804, 824-828, 917-920, 926-928 and 1151 Tremont Building; building at Mattapan; Rooms 610-613 Huntington Chambers; 226, 227 and 1132 Kimball Building; 501 Boylston Chambers; 601 and 602 Carney Building.

For Armories.

No. 120 Tremont street; Congress Hall, Charlestown; Bacon Hall, Roxbury, and 130 Columbus avenue; 7 Green street, one floor; 31 Irvington street.

For Wardrooms.

Masonic Hall, Stirk's Hall, East Boston; Deacon Hall, Roxbury; Clan-Na-Gael Hall, Gray's Hall, South Boston; Dudley Street Opera House, Tomfohrde Hall, Minton Hall and Draper Hall.

For County Purposes.

Rooms 201-210 Pemberton Building, for Land Court; two rooms at 274 Boylston street, for Medical Examiner.

The ambulance station is located on National street, South Boston, on land leased of the Carney Hospital. The station is open day and night, and answers calls at any hour and in any section of the city for persons desiring treatment at the Carney or other hospitals.

Number of accident cases during year	112
“ medical “ “ “	468
“ surgical “ “ “	250
Total	<u>830</u>

Number transferred to Carney Hospital	461
“ “ Children’s Hospital	37
“ “ City Hospital	42
“ “ Lying-in Hospital	15
“ “ St. Elizabeth’s Hospital	22
“ “ Good Samaritan Hospital	4
“ “ Consumptives’ Hospital, Quincy street	6
“ “ Long Island Hospital	16
“ “ St. Monica’s Hospital	9
“ “ Tewksbury Hospital	21
“ “ Cullis Consumptives’ Hospital, Massachusetts Charity Eye and Ear Hospital	2
“ “ New England Hospital	3
“ “ Soldiers’ Home, Chelsea	11
“ “ Holy Ghost Hospital	9
“ “ St. Mary’s Infant Asylum	148
“ “ Baptist Hospital	4
“ “ Homœopathic Hospital	3
“ “ Channing Hospital	2
“ “ Infant Hospital	4
“ “ Boothby Hospital	2
“ “ Faulkner Hospital	3
“ treated at Chelsea fire	1
Total	<u>830</u>

Requests were received for use of ambulance by city departments, as follows:

Consumptives’ Hospital Department	180
Health Department	40
Soldiers’ Relief Department	6
Associated Charities	2
Overseers of the Poor	2
Total	<u>230</u>

The following will give a general idea of the repair work done in the various buildings in charge of this department, payments for which were made from the appropriation of 1908–1909.

City Hall.

Covered four skylights with galvanized-iron mesh and painted same	\$112 88
Changed over steam connections between City Hall and probate buildings, also connected up one side of City Hall under low pressure basis	379 01
Repaired tar and gravel roof and copper flashing around pent house and skylights	180 80
Repaired No. 10 steam chest in boiler room	135 00
Installed radiator and general repairs on steam piping, radiators, valves, etc.	215 03
Furnished two unit cases of six sections, tops, bases, etc.	160 72
Installed stop valve and put on new counterweight ropes on east elevator	146 10
Furnished and installed new hoist and shipper ropes on east elevator	142 00
Cleaned off, shellaced, sized and retinted ceiling, washed off and painted walls, washed off, painted and enameled wood-work, stained and shellaced partition, painted and enameled partition, bronzed radiators, etc., in Mayor's public office	164 10
Furnished and laid new linoleum in Mayor's public office	115 54
Built new partitions, etc., and made general alterations in Mayor's public office	276 57
Bricked up fire boxes of four boilers	532 50
Removed old boiler and installed one new 54-inch horizontal tubular steam boiler	1,032 00
Repaired one steam boiler	161 99
Reset two steam boilers	285 00
One new Mosler safe and steel chest for the Collecting Department	800 00
Built fireproof vault in Assessing Department	450 00

Old Court House.

Relaid hard pine flooring, built new cases and enlarged old cases in Survey Division	\$332 15
Put in new girders in Room 25 to support ceiling	122 77
General repairs on plumbing	112 58
Installed two 4-inch valves in steam supply mains and changed system so that either end of building might be heated separately	121 00

28 Court Square and 30-32 Tremont Street.

Cleaned off and tinted ceiling, washed walls and woodwork and painted same two coats oil paint, shellaced and varnished furniture, bronzed all radiators, etc., in Engineer's room, Sewer Division	\$380 85
Built new clothes compartment in Children's Institutions Department	233 00

62-64 Pemberton Square.

General patching of plastering and whitewashing	\$172 10
Installed new plumbing apparatus throughout building	742 83

Charity Building, Chardon Street.

Washed off and whitened ceiling, painted walls two coats, wood-work three coats, bronzed steam piping and radiators, cleaned furniture in Room 35	\$141 73
Removed shelving, also wooden ventilator boxing about steam piping, new hard pine floor in corridor, etc.	376 80

Repaired fire boxes and bricked up arches of two steam boilers .	\$124 88
Furnished and installed cold air ducts and inclosed the indirect stack heaters with galvanized iron boxes in place of wood, repaired tin work over stacks, new iron grilles at openings for fresh air and dampers in ducts	385 00
Lathed and plastered the walls and ceilings of the basement rooms and corridors where wooden cold air boxes were replaced, also patched lathing and plaster	177 00
Cut through outer wall, also partition walls in basement story, for ventilators, also filled in openings in walls around ventilators, furnished and installed six Eureka ventilators and five register facings in both inside and outside walls	277 00
Excavated for trenches, put in concrete trench walls with trench covers of reinforced concrete, reinforced and underpinned old brick walls	325 00
Made general repairs on steam piping, radiators, etc.	258 78

Wayfarers' Lodge.

Repaired broken plaster, whitened all ceilings, also the entire basement	\$323 20
Removed old boiler and installed one new 30x11 steam boiler .	471 00
Installed new hot water tank, 2 feet by 8 feet	132 00
Bricked up face of building, which had bulged out and was in dangerous condition	767 88

Municipal Building, Upham's Corner.

Cleaned off and painted walls and ceiling in library room	\$547 23
All outside window sashes and frames reputtied and painted, outside doors cleaned off, bleached, sandpapered, filled, varnished and rubbed. Reset all broken glass. Removed old paint from window glass and obscured same throughout the building. Painted iron screens, iron fence and also iron grille work over the front doors. Touched up and painted ceilings on second floor	502 31
Bricked up fire boxes of two boilers	169 30
Removed old lead-lined iron supply pipes in shower, locker and boiler rooms, etc., and replaced same with brass piping, ...	383 06

Old City Hall, Charlestown.

Tinned and repaired roof, cleaned out and repaired gutters .	\$111 42
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Old State House.

Repaired slate roof and copper ridge, removed slate and reslated above gutters, put on 224 feet of gutter irons on both sides of building	\$498 95
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Ambulance Station.

Put ambulance No. 1 in good condition, including repairs, painting, varnishing, etc.	\$120 00
General repairs on doors, windows, stalls, etc.	107 49

Faneuil Hall.

Cleaned off and renovated side walls, ceilings and balustrades in halls and stairways and also side walls and ceilings in the three rooms on south side in armory hall	\$360 00
Heating hall during winter season	1,750 00

Quincy Market.

Covered thirty-two skylights with heavy galvanized-iron mesh and painted same	\$272 80
Repaired drain and installed tide valve	174 94
Furnished and installed safety tread on basement stairs	180 26
New granolithic floor in basement stall 11½	187 00

Curtis Hall.

Changed over electric lighting system in the check room and enlarged capacity of the stereopticon pocket in gallery	\$289 00
Changed over four pairs of outside doors to swing out	139 43

Wardroom 17 Building.

General repairs on plumbing apparatus	\$133 25
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Lancers' Armory.

Made general repairs on tin roof and painted same	\$205 72
Made general repairs on plumbing apparatus, new waste pipe to sink, new conductor pipe to drain, etc.	101 27

Troop B, First Battalion of Cavalry.

Furnished and installed bowl slabs, also new slate slabs for shower baths	\$343 00
Furnished and installed new plumbing apparatus, including showers, wash basins, water-closets, urinal sinks, Magee hot water heater, iron hot water tank, etc.	625 00
Built partitions sheathed on both sides, also new rooms for officers' quarters, closets, etc., also sixty-five new clothes closets	1,972 00
Built sixty-five new gun lockers, racks for sabres, three chests, etc.	497 00
Painted all new fittings in quarters	109 00

Courthouse, Pemberton Square.

Furnished one new steel safe	\$425 00
Furnished one new wire, prisoners' cage	100 00
Furnished one new prison van	800 00
Furnished and installed new cables on north elevator and overhauled operating valve, repaired shipper rope, shortened and adjusted cables	150 00
Furnished three special filing cabinets	556 00
General repairs on plumbing apparatus	329 13
Put in new drainage system, grease traps, ventilation, etc.	3,158 12
Built new brick tunnel around drainage pipes, manholes, etc., digging for plumbers, repaved areaways, etc.	3,492 99

Courthouse, Roxbury.

Furnished and installed 364 wood document files finished	\$1,456 00
Furnished and installed 516 wood document files finished	825 60

Courthouse, West Roxbury.

Enlarged the clerk's office, relocated men's detention room, provided additional room for the assistant clerk and a new detention room for women, also a circular flight of stairs to connect second floor with mezzanine floor, including all changes in plumbing, gas piping, steam piping, etc. Built new storage vault, with steel door for same. Painted all new work three coats oil paint, and all old work one coat, ...	\$1,135 00
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Courthouse, Dorchester.

Repaired steam boiler	\$236 75
Built new brick addition to building, 49 feet by 14 feet, two stories high. This gives additional court room, room for juvenile court, judge's and clerk's office on street floor, matron's room and two new cells in basement, also additional room for library purposes on second floor. Installed enameled iron sink, four new water-closets, with tanks, supply, etc., also four new Sovereign Radiators, with direct supply to same. The cost of same completed to be	6,327 54

The following is a general financial statement of the Public Buildings Department for year 1908-1909:

APPROPRIATION.

General expenses	\$200,000 00
General expenses, transfer	10,684 03
General expenses, income	206 35
County buildings	51,388 03
Total	<u>\$262,278 41</u>

EXPENDITURES.

Public buildings	\$163,301 20
Wardrooms	11,278 70
Armories	27,132 09
Architect's division	2,848 86
Ambulance station	6,329 53
County buildings	51,388 03
Total	<u>\$262,278 41</u>

SPECIAL APPROPRIATIONS.

City building, Adams and Arcadia streets, addition	<u>\$5,197 28</u>
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RECAPITULATION.

Expended on general appropriations	\$262,278 41
Expended on special appropriations	5,197 28
Total expenditure of department	<u>\$267,475 69</u>

The following is a comparative statement of the credits and expenditures on account of appropriation for "Public Buildings Department, General Expenses":

FOR THE PAST NINE YEARS.

YEAR.	Appropriation.	Transfers and Income.	Unexpended Balance.	Expenditures.
1900-1901.....	\$216,000 00	\$53,754 89	.....	\$269,754 89
1901-1902.....	284,000 00	24,411 69	.....	308,411 69
1902-1903.....	250,000 00	.....	.....	250,000 00
1903-1904.....	240,000 00	1,425 99	.....	241,425 99
1904-1905.....	240,000 00	11,997 67	.....	251,997 67
1905-1906.....	241,500 00	.....	\$397 44	241,102 56
1906-1907.....	240,000 00	18,378 19	.....	258,378 19
1907-1908.....	250,000 00	465 45	.....	250,465 45
1908-1909.....	200,000 00	10,890 38	.....	210,890 38

Public Buildings:

Salaries	\$10,747 69
Janitors, cleaning, and engineers .	52,480 35
Mechanics	6,607 41
Printing, stationery and postage,	1,207 67
Advertising	140 41
Telephones	443 99
Car fares	266 42
Messenger service	38 50
Rents and taxes	25,281 65
Furniture and furnishings . . .	5,248 42
Water rates	80 50
Ice	1,450 26
Teaming	515 29
Fuel	11,816 25
Gas	992 81
Electric light	16,261 43
Horse-keeping, etc.	444 41
Supplies	2,787 59
Disinfectants	252 00
Clocks and repairs	175 50
Pounds and scales	46 10
Iron, copper and wire work . .	929 45
Masonry	2,976 39
Carpentry	3,473 89
Plumbing	2,783 88
Gas and electric fixtures . . .	1,338 61
Plastering and whitening . . .	904 33
Roofing and gutters	1,059 07
Painting and glazing	2,935 58
Heating and ventilating . . .	7,061 57
Auxiliary fire alarm	180 00
Elevators, repairs	741 83
Awnings	83 50

Carried forward \$161,752 75

<i>Brought forward</i>	\$161,752 75	
Flags and repairs	65 85	
Marble work	106 85	
Granolithic work	222 00	
Lawns and grounds	25 00	
Review stand	59 73	
Licenses	50 00	
Public clocks	1,019 02	
		\$163,301 20
<i>Wardrooms:</i>		
Rents	\$5,326 25	
Janitors and cleaning	2,771 14	
Teaming	45 00	
Fuel	1,146 39	
Gas	53 49	
Electric light	890 60	
Masonry	20 50	
Painting and glazing	42 01	
Plumbing	202 76	
Carpentry	358 97	
Roofing and gutters	6 03	
Furniture and furnishings	187 20	
Gas and electric fixtures	47 79	
Heating and ventilating	168 96	
Iron, copper and brass work	4 61	
Clocks and repairs	7 00	
		11,278 70
<i>Armories:</i>		
Rents	\$12,517 61	
Janitor and cleaning	330 00	
Fuel	1,117 73	
Water rates	108 46	
Gas	2,196 12	
Electric light	1,552 55	
Telephones	85 66	
Furniture and furnishings	534 08	
Flags and repairs	7 25	
Rifle practice	4,757 44	
Carpentry	2,018 06	
Painting	496 50	
Plumbing	803 12	
Gas and electric fixtures	4 64	
Roofing and gutters	228 72	
Masonry	31 15	
Marble work	343 00	
		27,132 09
<i>Ambulance Station:</i>		
Rent of land	\$250 00	
Janitors, drivers and cleaning	4,318 32	
<i>Carried forward</i>	\$4,568 32	\$201,711 99

<i>Brought forward</i>	\$4,568 32	\$201,711 99
Horse-keeping, shoeing, etc.	599 26	
Telephone	82 45	
Teaming	45 00	
Fuel	190 53	
Gas	24 03	
Electric light	98 08	
Ice	27 40	
Supplies	27 86	
Medical supplies	24 15	
Furniture and furnishings	75 11	
Clocks and repairs	3 00	
Ambulance repairs	363 70	
Carpentry	155 29	
Painting and glazing	2 09	
Heating and ventilating	1 25	
Plumbing	30 40	
Roofing and gutters	11 61	
		6,329 53
<i>Architect Division:</i>		
Salaries	\$2,824 41	
Stationery, etc.	24 45	
		2,848 86
<i>County Buildings:</i>		
Rent	\$4,133 33	
Janitors and cleaning	9,809 57	
Stationery	4 20	
Ice	225 81	
Fuel	11,206 23	
Gas	652 39	
Electric light	6,765 60	
Furniture and furnishing	4,556 31	
Supplies	827 56	
Disinfectants	30 00	
Teaming	25 80	
Clocks and repairs	102 13	
Lawns	522 55	
Awnings and flags	47 95	
Iron, brass and wire work	172 75	
Masonry	3,633 24	
Carpentry	1,734 83	
Plumbing	3,863 57	
Gas and electric fixtures	632 81	
Painting	205 60	
Heating and ventilating	1,192 17	
Marble work	51 55	
Elevators, repairs	192 08	
New prison van	800 00	
		51,388 03
		<u>\$262,278 41</u>

RECAPITULATION OF GENERAL EXPENSES.

Rent and taxes, public buildings	\$25,281 65
Rent and taxes, wardrooms.	5,326 25
Rent and taxes, armories	12,517 61
Rent of rifle range and transportation	4,757 44
Electric lighting.	16,261 43
Fuel	11,816 25
Water and ice.	1,639 22
Engineers, janitors, cleaning and mechanics	62,188 90
Salaries	10,747 69
Gas	992 81
Supplies and disinfectants	3,039 59
Horse-keeping, teaming, wagon repairs and car fares	1,309 62
Telephone and messenger service, printing, stationery, advertising, etc	1,927 73
Fuel, gas, electric lighting, and repairs, armories, ...	8,798 84
Fuel, gas, electric lighting and repairs, ward-rooms	2,942 11
General repairs, public buildings	26,012 65
Furniture, clocks and furnishings	6,152 20
Architect's division	2,848 86
Ambulance station	6,329 53
	\$210,890 38
County buildings	51,388 03
	<u>\$262,278 41</u>

The following is a statement of the fuel that has been supplied on requisition of the several departments:

Coal.

	Tons.	Pounds.
Furnace	3,286	1,660
Egg	1,230	1,700
Stove	436	500
Cumberland	1,147	1,300
Cannel	28	1,000
Nut	37	—
Franklin	1	—
Total	<u>6,165</u>	<u>6,160</u>

Wood.

	Cords.
Nova Scotia	12 ⁵ / ₈
Pine	44 ³ / ₈
Total	<u>57</u>

The total cost of the above was \$39,402.30, and was distributed as follows:

Fire Department	\$12,875 39
Police	4,745 89
Public Buildings Department	4,853 76
Library Department	3,369 45
County of Suffolk	5,101 61
Bath Department	2,677 82
Park Department	1,723 85
Health Department	992 42
Overseers of the Poor Department	1,246 25
Public Grounds Department	1,193 20
Cemetery Department	600 86
Schoolhouse Department	13 30
Market Department	8 50
	<u>\$39,402 30</u>

The following is a statement showing buildings from which rent has been received during the past year, also income from other sources, together with the amounts, all of which are in charge of this department:

Old State House (Bostonian Society)	\$100 00
Curtis Hall	1,190 00
Faneuil Hall	1,770 00
Wardrooms	625 00
Sale of old furniture, etc.	2 00
Sale of old furniture, etc., to Schoolhouse Department	300 00
Sale of old junk	179 27
Sale of old waste paper	37 07
Sale of old building, Poplar street, Ward 23	5 00
Redeemed car tickets	36 35
Use of ambulance	3 00
Rotunda and offices, Quincy Hall	3,850 00
Produce Exchange	1,950 00
Old Franklin Schoolhouse	125 00
Rooms in Quincy Hall	637 50
Repair Shop Annex	996 00
City scales	218 82
Pay station telephone	43 62
Armories, rent from Commonwealth	9,153 00
Vine Street Chapel	3 00
Thomas Street Schoolhouse	1 00
Income from French Fund	170 00
Sale of horse (Bath Department)	150 00
Total	<u>\$21,545 63</u>

The following is a list of the employees in the department on January 31, 1909:

Public Buildings Department:

- 1 Superintendent.
- 3 Clerks.
- 1 Inspector.
- 1 Chief Engineer.
- 3 Engineers.
- 1 Assistant Engineer.
- 5 Firemen.
- 1 Superintendent of Janitors.
- 19 Janitors.
- 6 Janitors in wardrooms.
- 2 Watchmen.
- 3 Custodians.
- 1 Storekeeper.
- 1 Elevatorman.
- 1 Carpenter.
- 2 Electricians.
- 1 Locksmith.
- 1 Sheet iron worker.
- 45 Women, cleaning.

Ambulance Station:

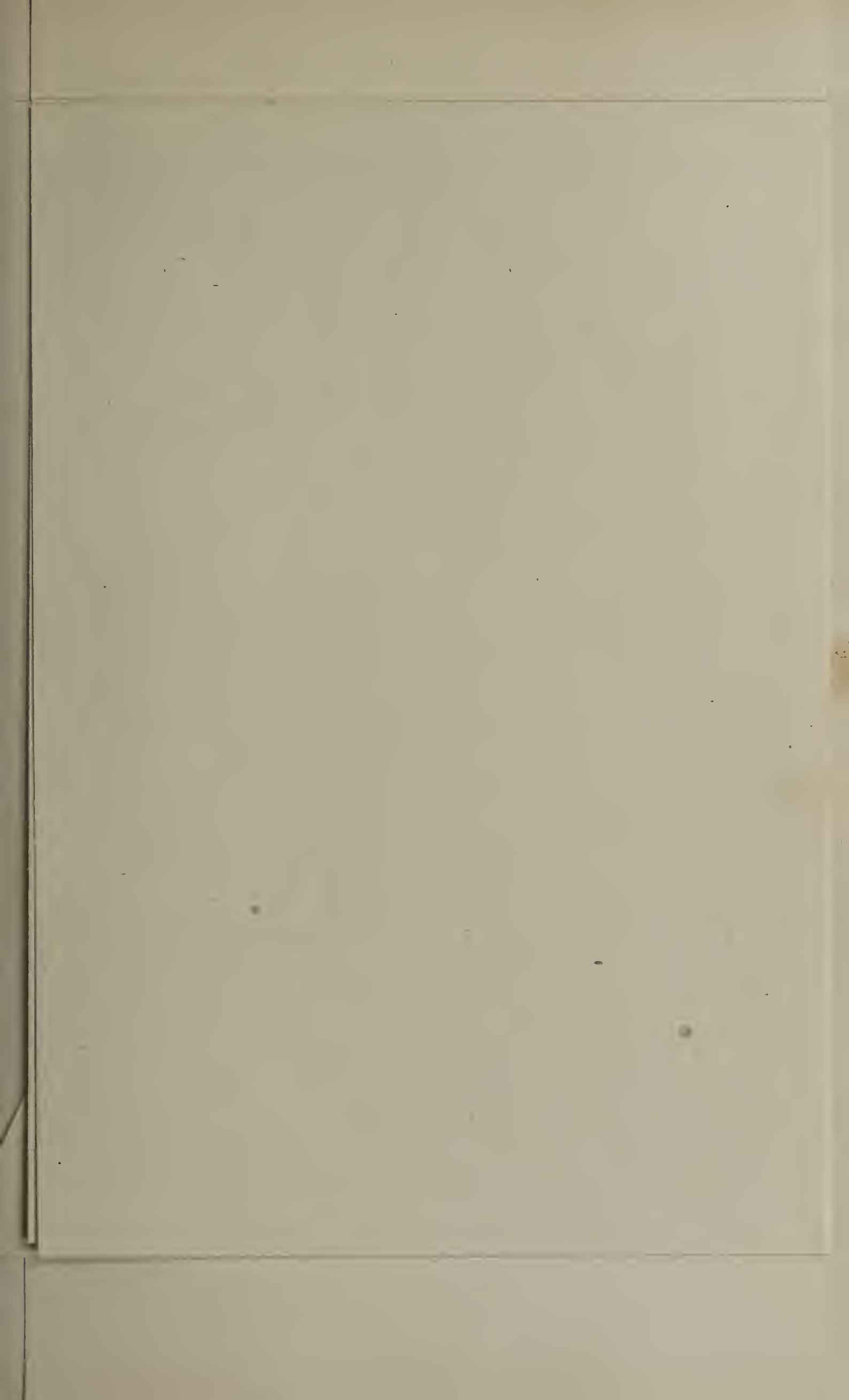
- 5 Drivers and janitors.
- 1 Woman, cleaning.

County Buildings:

- 10 Custodians and janitors of various district courthouses.
- 1 Janitor, session without jury.
- 7 Women, cleaning.

Respectfully submitted,

G. W. MORRISON,
Superintendent.



ITEMIZED EXPENDITURES ON EACH PUBLIC BUILDING FOR 1908-1909.

PUBLIC BUILDINGS.	City Hall.	Old Court House.	Tremont Building.	30 and 32 Tremont Street.	28 Court Square.	64 Pemberton Square.	37 Pemberton Square.	Charity Bureau.	City Temporary Home.	Wayfarers' Lodge.	Old State House.	Faneuil Hall and Market.	Quincy Market.	Huntington Chambers.	Old Franklin School Building.	11 Wareham Street.	Police Stations.	Old Town Hall, Brighton.	Supplies, Room 8, City Hall.	City Scales.	Pounds.	City Building, Washington and Richmond Sts.	Westerly Hall.	City Building, Washington and Norfolk Streets.	Curtis Hall.	Superintendent's Office.	Mechanics' Labor.	Carney Building.	Kimball Building.	Boylston Chambers.	Public Clocks.	Land on Soley Street.	Smith Schoolhouse, Joy Street.	Charlestown City Hall.	Municipal Building, Columbia Road.	Architects' Division.	Ambulance Station.	TOTAL.
Rents and taxes.....			\$11,376 00			\$2,577 50	\$6,418 50						\$1,800 00				\$258 00				\$25 00								\$226 65	\$1,100 00	\$1,500 00						\$250 00	\$25,531 65
Salaries.....																										\$10,747 69										\$2,824 41	13,572 10	
Janitors, engineers, firemen and cleaning....	\$7,259 55	\$12,433 91	200 40	\$4,312 05	\$3,064 50	1,240 15		\$901 80			\$1,489 99	\$3,009 15		394 50		\$5,373 41		\$25 00	\$795 00					\$1,381 52	\$2,024 05							\$25 00		\$1,872 53	\$6,677 84		4,156 62	56,636 97
Mechanics.....																											\$6,607 41											6,607 41
Printing, stationery and postage.....																										1,207 67										24 45	1,232 12	
Advertising.....																										140 41											140 41	
Car fares.....																										266 42											266 42	
Telephone.....																										443 99										82 45	526 44	
Water rates.....						64 50											10 00				6 00																80 50	
Ice.....	730 68	341 50	43 43		194 06	15 04		15 00				15 00		20 00		52 80														4 75			18 00		27 40	1,477 66		
Fuel.....	7,336 56					148 75					285 04				\$225 75	1,167 15								354 00	168 00							319 00	1,812 00		190 53	12,006 78		
Gas.....	369 14	245 70		3 50	36 16						34 55	64 36		80 34									\$5 22		2 97							149 79	1 08		24 03	1,016 84		
Electric lighting.....	6,125 30	3,722 04	412 67	1,063 06	531 56	172 11		18 25			91 13	424 30		11 35		82 68								545 24	578 99			20 30	23 80	98 88	\$313 20			2,026 57	98 08	16,359 51		
Medical supplies.....																																				24 15	24 15	
Horse-keeping, hire, etc. (includes purchase of one horse).....																										444 41										599 26	1,043 67	
Ambulance repairs.....																																				363 70	363 70	
Teaming.....																										515 29										45 00	560 29	
Furniture.....	3,914 74	222 56	221 25	196 27	233 45					\$75 00	75 00	113 50		5 00		12 50								17 60	16 05				58 00	10 00			75 00	2 50	75 11	5,323 53		
Supplies.....																			2,787 59																	27 86	2,815 45	
Disinfectant.....		177 00																								15 00							24 00	36 00		252 00		
Masonry.....	900 35	65 25		25 00		76 25		730 13		767 88	44 00	83 78	\$7 50													37 50					\$22 30	47 15	169 30			2,976 39		
Carpentry.....	843 26	987 50	6 63	237 95	100 20	159 63		640 52		9 85	20 44	65 45	71 42		21 43	2 48									150 23				6 00		51 16	70 28	29 46		155 29	3,629 18		
Plumbing.....	324 09	276 50		5 00	96 45	745 16		288 84			29 30	91 00	265 32			29 73		7 00							54 83							66 91	503 75		30 40	2,814 28		
Gas and electric fixtures.....	274 56	135 66		131 42	52 69			177 85			2 72	61 87				107 70		1 20							299 03									93 91			1,338 61	
Plastering and whitening.....	80 95					172 10		311 13		323 20			16 95																								904 33	
Roofing and gutters.....	180 80	48 20			5 19	19 54		113 04			498 95		61 07										9 00		11 86							111 42			11 61	1,070 68		
Iron, copper and wire work.....	151 79	27 84			5 90			18 09				462 05	253 13		9 90	60				\$46 10														15			975 55	
Painting and glazing.....	631 19	238 88	1 20	58 74	440 67	76 33		348 95	\$23 90		5 60	16 81	7 08		3 20	7 15										20 34											2,937 67	
Heating and ventilation.....	2,959 10	201 03			31 06	5 75		834 42		682 92	15 19	1,750 00			2 00	97 26							29 28	54 78	81 95								169 89	146 94		1 25	7,062 82	
Elevators, City Hall and Old Court House.....	681 48	60 35																																				741 83
Public clocks, winding and repairs.....																																1,019 02						1,019 02
Auxiliary Fire Alarm Company.....																										180 00												180 00
Awnings.....		13 50	6 50	20 00	17 50			15 50						6 00		1 50				3 00																		83 50
Flags and repairs.....											28 20	37 65																										65 85
Lawns.....																									\$25 00													25 00
Laundry.....																																					161 70	
Marble work.....	106 85																																					106 85
Clocks.....	76 50	50 00	10 50	2 50	10 00	2 50					4 50	3 50				13 00																					178 50	
Review stand.....	59 73																																					59 73
Granolithic work.....													187 00												35 00													222 00
License.....																									50 00													50 00
Messenger service.....																										38 50												38 50
Totals.....	\$33,006 62	\$19,247 42	\$12,278 58	\$6,055 49	\$4,819 39	\$5,475 31	\$6,418 50	\$4,413 52	\$23 90	\$1,858 85	\$2,624 61	\$6,215 37	\$852 52	\$2,317 19	\$262 28	\$6,947 96	\$268 00	\$33 20	\$3,582 59	\$49 10	\$31 00	\$25 00	\$43 50	\$2,388 14	\$3,510 80	\$13,984 38	\$6,607 41	\$304 95	\$1,144 55	\$1,598 88	\$1,383 38	\$25 00	\$22 30	\$2,923 97	\$12,557 54	\$2,848 86	\$6,329 53	\$172,479 59

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

Itemized Expenditure on Each Ward Room for 1908-1909.

WARD ROOMS.	Ward Room 1.	Ward Room 2.	Ward Room 3.	Ward Room 4.	Ward Room 5.	Ward Room 6.	Ward Room 7.	Ward Room 8.	Ward Room 9.	Ward Room 10.	Ward Room 11.	Ward Room 12.	Ward Room 13.	Ward Room 14.	Ward Room 15.	Ward Room 16.	Ward Room 17.	Ward Room 18.	Ward Room 19.	Ward Room 20.	Ward Room 21.	Ward Room 22.	Ward Room 23.	Ward Room 24.	Ward Room 25.	Total.
Rents.....	\$230 00									\$30 00		\$50 00	\$1,050 00	\$1,260 00							\$725 00	\$650 00	\$600 00	\$731 25		\$5,326 25
Janitors and cleaning.....		\$232 00	\$352 00	\$20 00	\$15 00		\$96 50	\$643 39	\$353 00	19 00	\$9 00				\$114 00		\$300 00		\$263 65	\$117 40		63 00			\$173 20	2,771 14
Fuel.....		207 39	300 00					156 95	3 25								153 75		189 75						135 30	1,146 39
Gas.....		43 50															2 65		3 90	16		3 05			23	53 49
Electric lighting.....								137 60	245 58						19 60		150 90		226 79	20 46		16 16			73 51	890 60
Teaming.....																	45 00									45 00
Furniture.....		10 50					6 90	132 30																37 50		187 20
Carpentry.....		33 36	34 29				8 48	60 90									37 54		70 75	59 32					54 33	358 97
Painting and glazing.....		7 75	3 50						2 40								17 75		6 86						3 75	42 01
Plumbing.....		14 58			5 70												145 51		28 70	8 27						202 76
Roofing and gutters.....			3 00						2 41								62									6 03
Masonry.....								20 50																		20 50
Heating and ventilation.....		26 91	46 86					30 07	20 99								40 53		3 60							168 96
Gas and electric fixtures.....		75	2 43	13 20				25 77	1 50								4 14									47 79
Iron and copper work.....																			4 61							4 61
Clocks and repairs.....							3 00	4 00																		7 00
Totals.....	\$230 00	\$576 74	\$742 08	\$33 20	\$20 70		\$114 88	\$1,211 48	\$629 13	\$49 00	\$9 00	\$50 00	\$1,050 00	\$1,260 00	\$133 60		\$898 39		\$798 61	\$205 61	\$725 00	\$732 21	\$600 00	\$768 75	\$440 32	\$11,278 70

Itemized Expenditures on Each County Building for 1908-1909.

	Courthouse, Pemberton Square.	Roxbury Court.	Dorchester Court	Charlestown Court.	East Boston Court.	South Boston Court.	West Roxbury Court.	Brighton Court.	Jail, Charles street.	Land Court.	Medical Examiners.	Superior Court, Room 10, Old Court House.	Total.
Rents and taxes.....	.....	\$4,176 17	\$724 60	\$1,012 00	\$780 00	\$772 50	\$745 00	\$765 00	.....	\$3,950 00	\$183 33	.....	\$4,133 33
Janitors and cleaning.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,809 57
Printing, stationery and postage.....	.....	.....	.....	.....	.....	.....	.....	.....	\$4 20	15 00	.....	.....	4 20
Ice.....	\$210 81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	225 81
Fuel.....	9,756 99	884 70	.....	196 00	134 00	155 55	.....	78 99	.....	.....	.....	.....	11,206 23
Gas.....	602 55	6 33	5 77	10 98	8 90	1 64	14 89	1 33	.....	.....	.....	.....	652 39
Electric lighting.....	5,876 66	461 04	4 10	.....	41 35	26 28	.....	.....	356 17	.....	.....	.....	6,765 60
Teaming.....	.....	14 25	1 25	3 75	2 80	1 25	1 25	1 25	.....	.....	.....	.....	25 80
Furniture.....	1,957 14	2,242 76	189 23	13 50	.....	60 00	54 33	11 60	.....	27 75	.....	.....	4,556 31
Supplies.....	727 09	30 35	.....	7 60	22 60	7 60	15 00	14 25	.....	.....	.....	3 07	827 56
Disinfectant.....	30 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30 00
Masonry.....	3,621 74	.....	.....	.....	11 50	.....	.....	.....	.....	.....	.....	.....	3,633 24
Carpentry.....	309 12	102 20	12 60	.....	4 50	18 83	1,267 98	19 60	.....	.....	.....	.....	1,734 83
Plumbing.....	3,776 84	81 73	.....	1 50	.....	.....	3 50	.....	.....	.....	.....	.....	3,863 57
Gas and electric fixtures.....	532 89	53 52	30 56	3 84	.....	.....	8 00	4 00	.....	.....	.....	.....	632 81
Iron, copper and wire work.....	105 25	67 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	172 75
Painting and glazing.....	95 60	16 00	50 00	.....	.....	.....	44 00	.....	.....	.....	.....	.....	205 60
Heating and ventilating ..	766 21	101 69	254 17	.....	54 66	10 80	1 64	3 00	.....	.....	.....	.....	1,192 17
Elevators.....	192 08	.....	.....	.....	.....	.....	.....	5 00	.....	21 45	.....	.....	192 08
Awnings.....	.....	7 00	11 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	44 45
Flags and repairs.....	.....	3 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 50
Marble work.....	51 55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51 55
Clocks and repairs.....	92 50	1 13	.....	2 00	.....	6 50	.....	.....	.....	.....	.....	.....	102 13
Lawns.....	.....	1 70	.....	.....	.....	.....	.....	520 85	.....	.....	.....	.....	522 55
New van (for prisoners)...	.....	.....	.....	.....	.....	.....	.....	.....	800 00	.....	.....	.....	800 00
Totals.....	\$28,705 02	\$8,251 57	\$1,283 28	\$1,251 17	\$1,060 31	\$1,060 95	\$2,155 59	\$1,424 87	\$1,160 37	\$4,014 20	\$183 33	\$837 37	\$51,388 03

Itemized Expenditures on Each Armory for 1908-1909.

ARMORIES.	Headquarters Second Brigade.	Co. A, Fifth Regiment.	Co. H, Fifth Regiment.	Co. I, Sixth Regiment.	Co. A, Eighth Regiment.	Co. A, First Battalion of Cavalry.	Co. D, First Battalion of Cavalry.	First Corps Cadets.	Rifle Practice.	Ancient and Honorable Co. Artillery Co.	Troop B, First Battalion of Cavalry.	Total.
Rents.....	\$954 00	\$1,200 00	.....	\$1,466 63	.....	.....	\$1,687 50	\$6,000 00	.....	.....	\$1,209 48	\$12,517 61
Janitors and cleaning.....	120 00	.....	.....	110 00	.....	.....	.....	.....	.....	.....	100 00	330 00
Fuel.....	.....	31 85	\$3 25	.....	\$4 88	.....	.....	1,077 75	.....	.....	.....	1,117 73
Water.....	.....	.....	.....	.....	.....	.....	19 50	72 80	.....	.....	16 16	108 46
Gas.....	.....	224 55	41 67	16 14	.....	\$0 62	48 34	1,843 97	.....	.....	20 83	2,196 12
Electric lighting.....	13 13	.....	.....	208 72	434 58	440 34	.....	.....	.....	\$420 95	34 83	1,552 55
Rifle practice.....	.....	.....	.....	.....	.....	.....	.....	.....	\$3,562 13	.....	.....	3,562 13
Telephone.....	85 66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	85 66
Taxes.....	.....	.....	.....	.....	.....	.....	.....	.....	147 07	.....	.....	147 07
Furniture.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	534 08	534 08
Carpentry.....	.....	.....	.....	15 46	.....	6 40	.....	.....	.....	.....	1,996 20	2,018 06
Painting and glazing.....	.....	.....	.....	13 85	5 40	8 25	.....	.....	.....	360 00	109 00	496 50
Plumbing.....	.....	.....	7 55	32 65	27 90	110 02	.....	.....	.....	.....	625 00	803 12
Roofing and gutters.....	.....	.....	.....	.....	.....	228 72	.....	.....	.....	.....	.....	228 72
Masonry.....	.....	.....	.....	.....	.....	31 15	.....	.....	.....	.....	.....	31 15
Gas and electric fixtures..	.....	.....	.....	.....	4 64	.....	.....	.....	.....	.....	.....	4 64
Flags.....	.....	.....	.....	.....	.....	7 25	.....	.....	.....	.....	.....	7 25
Transportation of militia..	.....	.....	.....	.....	.....	.....	.....	.....	1,048 24	.....	.....	1,048 24
Marble work.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	343 00	343 00
Totals.....	\$1,172 79	\$1,456 40	\$52 47	\$1,863 45	\$477 40	\$832 75	\$1,755 34	\$8,994 52	\$4,757 44	\$780 95	\$4,988 58	\$27,132 09

PUBLIC BUILDINGS.

Buildings.	Location.	Number of Feet in Lot.	Remarks.
City Hall.....	School street....	25,915	
City Hall.....	City sq., Charlestown.	8,246	Police Station No. 15 in this building; also branch of the Public Library, and Municipal Court and Evening Drawing School. Police wagon stable on this lot.
Faneuil Hall and market under same.	Faneuil Hall sq..	8,460	
Faneuil Hall Market, house and hall over same.	North and South Market streets.	27,400	
Old State House.....	State street.....	4,239	Occupied by Bostonian Society.
¹ Curtis Hall.....	South st., W. R..	49,907	Branch of Public Library in this building.
No. 11 Wareham street....	Wareham street..	8,500	Wire Department located in this building.
Annex.....	Harrison avenue,	3,816	Rents for \$720 per annum.
Old Armory Building.....	Maverick street..	4,337	Wardroom 2 in this building; upper part occupied by Post 159, G. A. R.
Central Charity Bureau... }	Chardon street..	19,962	Boiler and storehouse on lot.
City Temporary Home..... }			
City Building.....	Washington and Richmond sts., Dorchester.	11,640	Used as branch library and sub-police station.
New City Building.....	Washington and Norfolk streets, Dorchester.	16,637	Used as branch library.
Town Hall.....	Washington st...	13,431	Wardroom 25 in this building; other room leased to Post 92, G. A. R.
Wayfarers' Lodge.....	Hawkins street..	9,523	
Church building.....	Cor. Dudley and Vine streets.	11,592	Wardroom 17 in this building, and Vine Street Chapel on this lot; Post 26, G. A. R., in chapel.
Old Franklin Schoolhouse..	Washington st...	11,471	Wardroom, Posts 15 and 7, G. A. R., in this building.
Old Cross Street Schoolhouse.	Cross street, Charlestown.	1,708	Occupied by Col. F. B. Bogan Camp No. 14, L. S. W. Vets.
Old Winthrop Schoolhouse.	Bunker Hill st., Charlestown.	7,927	Armory and Wardroom 3 in this building.
² Old Court House.....	Courtsquare....	15,175	Occupied by city offices.
³ Poplar Street Schoolhouse.	Poplar st., Ros...	7,842	Unoccupied.
Fuel House.....	Main street, Charlestown.	2,430	First floor used for storage of fuel by Fire Department; upper floor leased to Post 149, G. A. R.

¹ Building was badly damaged by fire December 15, 1908.² The above building was surrendered to this department as not wanted for school, fire or county purposes.³ Building sold, land to be sold later.

PUBLIC BUILDINGS.—*Concluded.*

Buildings.	Location.	Number of Feet in Lot.	Remarks.
Pierpont Schoolhouse	Hudson street. . .	4,216	Wardroom 7 in this building.
Westerly Hall	Centre st., West Roxbury.	5,644	Public Library branch in this building.
Stable and lot of land	Chauncey place.		Unoccupied.
Smith Schoolhouse	Joy street.	1,938	Leased to Post 134, G. A. R.
¹ Engine-house lot	Soley street.	2,230	
¹ Old Probate Court building.	Court square. . . .	2,423	Occupied by city offices.
Historical Building	30 and 32 Tremont street.	2,342	Occupied by city offices.
Wardroom, Ward 20	Meeting House Hill.		On lot with Mather Schoolhouse.
Wardroom, Ward 19	Elmwood street. . .	5,000	
Wardroom, Ward 8	No. 17 Blossom street.	4,021	
Municipal Building, Ward 16.	Columbia road. . .	13,244	Wardroom, branch library, swimming pool and gymnasium in this building.
² Thomas Street Schoolhouse.	Thomas street. . .	10,954	Leased to Boston Post 200, G. A. R.
Ambulance station	National street, South Boston.		On land leased of Carney Hospital.
Rifle range	Woburn, Mass. . .	51.3 acr's	Not in use.
Rifle range	Wilmington, Mass.	57 acres.	Not in use.

¹ The above buildings were surrendered to this department as not wanted for school, fire or county purposes.

² Transferred to this department June 3, 1905.

COUNTY BUILDINGS.

Buildings.	Location.	Number of Feet in Lot.	Remarks.
Courthouse	Pemberton square . . .	87,035	Three buildings.
Jail	Charles street.	130,740	
Municipal Court, Southern District.	Roxbury street.	14,300	
Municipal Court, East Boston.	High School Building.		
Municipal Court, S. Boston . . .	Cor. Dorchester and West Fourths sts.		
Municipal Court, Charlestown.	City square.		
Municipal Court, Brighton . . .	Washington street.		
Municipal Court, W. Roxbury.	Station House 13.		
Municipal Court, Dorchester . .	Station House 11.		

In addition to the foregoing the following property was leased by this department for city offices:

Location of Buildings.	Rent.	Number of Rooms.	Occupied by.
37 Pemberton square...	\$6,600 per year and taxes. Police Department pays one-fourth of rent.	Whole building.	Police Commissioner and Police Department.
Huntington Chambers...	\$1,800 per year,	4	Milk Inspectors, Rooms 610 to 613, inclusive.
Mattapan.....	\$258 per year..	3	Lock-up, Police Department.
73 Tremont street.....	\$450 per year..	1	Consumptives' Hospital Trustees, No. 1151.
73 Tremont street.....	\$4,550 per year..	13	Law Department, Nos. 730 to 742, inclusive.
73 Tremont street.....	\$5,650 per year..	16	Supply Department, Rooms 801 to 804, inclusive; Sanitary Department, Rooms 917 to 920, inclusive; Street Cleaning and Watering Department, Rooms 824 to 828, inclusive; Bridge Department, Rooms 926 to 928, inclusive.
73 Tremont street.....	\$1,000 per year..	3	Sewer Assessment Division of the Street Commissioners' Department, Nos. 414 to 416, inclusive.
¹ 43 Tremont street.....	\$760 per year..	.....	Publicity Bureau, Nos. 601, 602.
Kimball Building.....	\$400 per year..	1	Room 1132, Treasury Department.
Kimball Building.....	\$700 per year..	2	Rooms 226, 227, Board of Appeal.
739 Boylston street....	\$1,500 per year..	1 floor.	501 Boylston Chambers, Health Department.
62 and 64 Pemberton square.	\$2,000 per year and taxes.	Whole building.	Bath, Music, Art and Park Departments.
Pemberton Building....	\$3,950 per year..	10	Land Court, Rooms 201 to 210.
274 Boylston street.....	\$300 per year..	2	Medical Examiner.

¹ Room 602 vacated February 29, 1908; Room 601 vacated May 31, 1908.

ARMORIES.

The following list will show the locations and rents of all armories February 1, 1909, in charge of this department:

Occupied by.		Rent per Annum.	Location of Armory.
Headquarters Second Brigade.....		\$954	120 Tremont street.
¹ Company A, Fifth Regiment.....		\$1,200	Congress Hall, Charlestown. Lease expires Jan. 1, 1909.
¹	" H, " "	City Building..	Combination Wagon House No. 7, Winthrop st., Chsn.
²	" L, Sixth "	\$1,600	7 Green street. Lease expires December 1, 1908.
³	" A, Eighth "	City Building..	Old Winthrop Schoolhouse, Bunker Hill street.
	" A, First Batt. of Cavalry..	City Building..	Engine House No. 4, Bul- finch street.
	" B, " " " ..	\$1,400	31 Irvington street. Lease expires March 1, 1910.
	" D, " " " ..	\$1,350	Bacon's Hall.
	" A, " Corps of Cadets..	\$4,800	130 Columbus avenue.
	" B, " " " ..		
	" C, " " " ..		
	" D, " " " ..		

¹ Vacated December 31, 1908.
² Vacated November 30, 1908.
³ Now occupied by Company L, Sixth Regiment, moved from 7 Green street.

WARDROOMS.

The following list will show the location of the various wardrooms in this city and whether in city buildings or in hired buildings, and rent paid for same during the year:

Ward.	City or Rent.	Name of Building.	Location.
1	\$10 a meeting.	Stirk's Hall (Democratic)	695 Saratoga st.
1	\$25 " "	Masonic Hall (Republican)	344 Meridian st.
2	City Building.	Armory building	Maverick st.
3	" "	Old Winthrop Schoolhouse	Bunker Hill st., Chsn.
4	" "	Bunker Hill Grammar Schoolhouse.	Baldwin st., Chsn.
5	" "	Harvard Grammar Schoolhouse . . .	Devens st., Chsn.
6	" "	Faneuil Hall	Faneuil Hall sq.
7	" "	Pierpont Schoolhouse	Hudson st.
8	" "	New municipal building	17 Blossom st.

WARDROOMS. — *Concluded.*

Ward.	City or Rent.	Name of Building.	Location.
9	City Building.	Old Franklin Schoolhouse	Washington st.
10	" "	Rice Schoolhouse	Appleton st.
11	" "	Prince Schoolhouse	Exeter st.
12	\$10 a meeting.	Deacon Hall Annex	West Concord st.
13	\$15 " "	Clan-na-Gael Hall	247 D street.
14	\$30 " "	Gray's Hall	East Broadway.
15	City Building.	Courthouse, South Boston	Dorchester and West Fourth sts.
16	" "	Municipal building	Upham's Corner.
17	" "	Old Church Building	Dudley st.
18	" "	New Roxbury Courthouse	Roxbury st.
19	" "	Old pumping station	Elmwood st.
20	" "	Wardroom Building	Meeting House Hill.
21	\$40 a meeting.	Dudley Street Opera House	Dudley st.
22*	\$600 per year.	Tomfohrde Hall	Boylston Station.
23†	\$600 " "	Minton Hall	Forest Hills Station.
24‡	\$675 " "	Draper Hall	Adams st., Dorchester.
25	City Building.	Old Town Hall	Washington st., Bri.

* Lease expires October 1, 1909.

† Lease expires August 1, 1910.

‡ Lease expires April 30, 1909.

City scales, as follows, viz.:

North scales, Haymarket square.

South scales, City Stables yard, Albany street.

Roxbury scales, Eustis and Mall streets.

East Boston scales, Liverpool street.

West Roxbury scales, Centre and La Grange streets.

Jamaica Plain scales, Centre street and Starr lane.

City Pound, located as follows, viz.:

East Boston, Ashley avenue.



ANNUAL REPORT
OF THE
PUBLIC GROUNDS DEPARTMENT
FOR THE YEAR 1908.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

DEAR SIR, — In conformity with the requirements of the Revised Ordinances I herewith present my annual report of the Public Grounds Department for the year ending January 30, 1909.

The general work of the department has been performed faithfully and all the parks and squares have received a fair quota of maintenance, as a glance through the appended expenditures will show; but there are some conditions and necessary improvements to which I wish to direct your Honor's attention once more.

BOSTON COMMON.

The Boston Common has been in a most unsatisfactory state for years, owing to circumstances that the superintendent could not control, and the need of radical treatment becomes more obvious every year. Originally it was simply a pasture, and might still be capable of nourishing vegetation luxuriously if it had not been devitalized by modern manipulation. The system in vogue for generations of removing the grass cuttings in summer and the fallen leaves in autumn, which would fertilize naturally if allowed to

remain, has tended to impoverish the soil, the impure smoke and gas-laden air of the city have a deleterious effect on all vegetation, and the underground gas and other pipes and conduits are well-nigh fatal to all growth beneath the surface. At the present time the soil affords very little sustenance to either trees or grass, being worn out and impacted, impeding the percolation of either rains or melted snows. All efforts in the past to combat these conditions have been merely temporary alleviations and the need of a thorough renovation is now apparent to the public. In other words, the soil needs a complete ploughing up and the addition of an adequate quantity of good, virgin loam and mold.

A system of surface and sub-surface irrigation is also imperative and would be comparatively inexpensive. The rains of the seasons under existing circumstances (being diverted from the lawns through artificial channels is one cause) are totally unequal to the supply of sufficient moisture to give proper nutriment to grass and tree roots.

I am well aware that the remedies I have suggested will require a large outlay of money, for which no administration heretofore felt able to provide, being too great to come from ordinary resources. I now place my dependence for their materialization upon the generous legacy of \$4,000,000, bequeathed by the late George F. Parkman for the perpetual maintenance and care of Boston Common and other Boston parks. When this bequest becomes operative I trust that systematic and comprehensive plans will be formulated immediately for the complete restoration of Boston Common.

There are other drawbacks to the well-being of the Common which I think are sufficiently momentous to require mentioning; as its name implies the Common is for the general use and pleasure of the public, and being centrally located it attracts large gatherings on all holiday celebrations, too great to be confined to the paths; consequently the freedom of the lawns must be accorded them, and each festival entails a large expense, necessitating the renewal of sod and seed. If all the footways were of permanent material the abuse would be somewhat less, as the gravel from the walks carried into the lawns on the shoes of the multitude does more injury to the grass than trampling upon it.

The system of granolithic footways ought to be extended as rapidly as possible. I would suggest that it would greatly improve the general appearance of the Common if the "Mayor's Walk," so-called, extending from the central gate on Charles street to West street, were laid in granolithic material similar to the new "Railroad Walk," and that it be the next

footway to be selected for such treatment. The red gravel walks blend well with the variegated greens of the grass and trees, but they entail constant expense as they must be renewed annually, and also necessitate the continuation of the old plank system, which is inelegant, expensive to handle and maintain, affording indifferent service to pedestrians as compared with the newer granolithic paths.

The playground is still in need of extensive improvements. As there is an ever-increasing demand for athletic fields it is inexplicable that more interest is not manifested by the city government in this section of the Common. Of course it means that a special appropriation must be made for this particular purpose, but I am sure that a change for the better would be fully appreciated by the taxpayers. I would recommend that some of the walks surrounding or leading to the playground be discontinued, the erection of needed barriers or fences, and especially the modification of its grades, making the area more nearly level or gently undulating. Two years ago I included the amount of \$15,000 in the annual estimates for first-class equipments for a children's recreation and athletic field on the parade ground; the amount was authorized in the loan bill later but was not issued.

The old drain, extending from the cemetery to Charles street, was irretrievably damaged while the subway was being built. As a consequence, water overflows the Common, crosses Charles street and even submerges the Public Garden sidewalk in heavy storms. A new drain will cost about \$2,500.

PUBLIC GARDEN.

During the past year the usual successive displays, covering a period of six months, were highly gratifying and fully appreciated by the public generally, as evidenced by the usual throngs of daily visitors throughout the season. No attempt was made to enlarge the scope of ornamentation or to institute innovations of any kind.

Regardless of the beautifying effect, some improvements are required on this pleasure ground for the safety of the public health, chief of which is the sanitation of the water in the large pond, about which I shall not take space to expatiate, having done justice to the subject in two former reports. This pond is a source of unbounded pleasure to thousands of adults and children and ought not to be a menace to their health. Concreting the bottom of the pond is the only permanent remedy and has been advocated for years.

Many sections of the garden require regrading as a result of the settling of the surface, due to subsidence of the material

used in filling in the original marshy bottom. This should be done as soon as practicable.

A comfort station for the accommodation of the public has been greatly needed since the discontinuance of the Boston & Providence Railroad depot at Park square.

CITY GREENHOUSES.

The greenhouses erected in 1894 have been subjected to constant repairs for some years past and are now in positive need of a general methodical overhauling to prevent disastrous results, which are liable to occur at any moment, as the foundations and framework of several are in a state of absolute decay. A careful estimate of the probable cost of making them safe and habitable approximates \$4,000, which is a mere bagatelle compared with the value of the plants housed within them. This is a most pressing requirement and I trust that a special provision will be made for it this year. The need of a general renewal of the heating plant is becoming evident and cannot be deferred much longer.

INDEPENDENCE SQUARE.

The present tar walks in Independence square are in a most deplorable condition and should be renewed as soon as possible. Year after year the department has made unsuccessful attempts to obtain sufficient funds for new concrete or granolithic walks and the wear and tear of intervening time has increased this need. Last year the amount of \$10,000 for this purpose was authorized in the loan bill but was not issued. I would urge the necessity of making a beginning by renewing the main walks, which may be done in concrete for \$4,000.

STREET TREES.

The street trees of the city are of paramount importance and the problem of sustaining the life of these trees under the unfavorable conditions of city exigencies is complex. They are expected to grow in ground covered with bricks and mortar so that neither sun, air nor water can penetrate to their roots, which are also subjected to a blighting, poisonous atmosphere from the underground gas and drain pipes. In many instances the roots have been mutilated to accommodate pipes and conduits. Moreover, they must be encompassed overhead with electric and telegraph wires, by which large limbs are frequently seared to such an extent as to be dangerous to the traveling public and consequently must be removed. These circumstances show plainly that

life is a great struggle for our street trees, and we cannot wonder at the alarming mortality and that so many of them present an unsightly appearance while others show unmistakable signs of general decay. These adverse conditions could be lessened to some degree by more co-operation between the different departments engaged in street work and this department. If notified when any work on the streets involving interference with the trees in them is contemplated, this department would willingly detail expert foresters to supervise such work and thus minimize the dangers to the life of the trees.

FREE DISTRIBUTION OF STREET TREES.

For several years the city distributed free from 1,000 to 1,500 shade trees annually, most of which were planted in the large growing suburban districts by private individuals; but this method was attended with unsatisfactory results frequently, as people were inclined to limit the expense by not providing a sufficient quantity of good loam to ensure a thrifty growth, seldom paid any attention to the very important need of drainage and were apt to plant too deeply, notwithstanding the fact that printed directions for planting were given with the trees. Better results would undoubtedly pertain if this department were supplied with sufficient funds for doing this work.

CITY MADE BEAUTIFUL BY STREET TREES.

If we would have our city made beautiful, specimen shade trees should be planted liberally in the wide residential streets, more especially in the South End district, from which urgent appeals have come recently. I am well aware that this would be a work of some moment and expensive, including as it must the removal of sidewalk pavements, excavations and the requisite supply of good compost and drainage; nevertheless, in my estimation, it ought to be undertaken.

SUPPRESSION OF THE GYPSY AND BROWN-TAIL MOTHS, ETC.

This problem still attracts undiminished and commendable interest. Under the direction of the state superintendent the work of suppression was continued by the department with unabated zeal along the lines that were found to be most effective in previous years; but the nature of the pest is such that years of systematic contention against them will be necessary; therefore the wisdom of appropriating a large sum annually for this purpose is clearly apparent.

If our efforts to suppress these moths were abandoned now it is almost impossible to calculate the amount of evil that would result, not merely to tree life but also to the public. These facts are so well recognized that I need not enlarge upon them.

Following the infestation of the gypsy and brown-tails appears the elm-leaf beetle, which, as its name signifies, confines its ravages almost entirely to the elm trees and rapidly defoliates them, if unmolested. Spraying is the most effective method of contending with this pest. This year I find we are confronted with a comparatively new enemy, the leopard moth, commonly called the borer, which I have observed in large numbers and with which it is difficult to contend, as it shows very little evidence of its presence while at work, but is more fatal to tree life than any other moth.

EXPENDITURES ON PUBLIC GROUNDS FOR THE TWELVE MONTHS ENDING JANUARY 31, 1909.

GENERAL EXPENSES.

D. Henry Sullivan, superintendent	\$4,000 00	
Clerk hire	2,042 00	
		\$6,042 00
Clearing snow—labor and teaming		3,228 81
Buggy, wagon and horse keeping	\$1,918 16	
Horse hire	667 00	
		2,585 16
Plank walks, teaming and laying		1,200 00
Tools, paints, hardware, etc.		803 21
Rent of playgrounds		600 00
Telephone service		371 65
Cleaning and lighting office		311 44
Office repairs and furnishings		157 25
Stationery, printing and postage		176 12
Car fares		77 64
Cleaning statue and tablet		130 00
Teaming and repairing settees		110 00
Small supplies		95 73
Express charges		26 29
		\$15,915 30

COMMON AND PUBLIC GARDEN.

Laborers	\$28,531 67	
Bulbs, plants, shrubbery, etc.	3,865 67	
Teaming	1,719 50	
Repairs:		
Fountains and hydrants, \$551 48		
Bridge, plank walks,		
fences, etc.	420 43	
		971 91
Grass seed, sod, loam and fertilizer	912 44	
Sand, cement and gravel	411 13	
Duties and freight	279 20	
Small supplies	168 13	
Swans	97 00	
Lighting, heating and cleaning		
superintendent's office	91 46	
		37,048 11
(Of this amount, \$13,031.48 was expended for labor on the Common and \$2,548.33 for mate-		
<i>Carried forward</i>		
		\$52,963 41

Brought forward \$52,963 41

rials; on the Public Garden, \$15,500.19 was expended for labor and \$5,968.11 for materials.)

GREENHOUSES, NURSERY, COLD FRAMES, STABLE,
CARPENTER SHOP AND STORAGE LOT.

Laborers	\$18,393 61	
Coal	2,727 42	
Repairs:		
Greenhouses	\$744 58	
Barn	62 75	
Storage lot fence	40 97	
		848 30
Rent of land for nursery and cold frames	750 00	
Manure, loam and sand	709 50	
Small supplies	484 55	
Plants, seeds and stock	302 85	
Flower pots	243 06	
Teaming	180 50	
		24,639 79

STREET TREES.

Laborers	\$4,693 56	
Teaming, gratings, rope, etc.	283 07	
		4,976 63

SUPPRESSION OF GYPSY AND BROWN-TAIL MOTHS.

Laborers	\$3,126 98	
Arsenate of lead	253 00	
Creosote	59 52	
		3,439 50

SUPPRESSION OF GYPSY AND BROWN-TAIL MOTHS
— PRIVATE ESTATES.

Laborers	\$28,091 58	
Teaming	1,554 00	
Arsenate of lead, creosote and gasolene	1,537 65	
Apparatus and repairs	1,419 83	
Clerical hire	746 00	
Stationery, printing and postage	530 02	
Atlases	135 00	
Car fares	132 00	
Horse hire	52 00	
Refunds	38 46	
		34,236 54
<i>Carried forward</i>		\$120,255 87

Brought forward \$120,255 87

PARKS AND SQUARES.

(The expenditures for the following parks and squares comprise items for labor, teaming, plants, bulbs, grass seed, sod and repairs on fences, walks and fountains.)

Boston Proper.

<i>Berwick Park</i> .—Off Columbus avenue, near N. Y., N. H. & H. R. R., contains 3,800 square feet; inclosed by granite curb	\$110 49	
<i>Blackstone Square</i> .—Washington, West Brookline, West Newton streets and Shawmut avenue; contains 105,100 square feet	542 21	
<i>City Hall Grounds</i> .—School street; contains 7,700 square feet	73 50	
<i>Concord Square</i> .—Between Tremont street and Columbus avenue; contains 5,000 square feet	162 98	
<i>Copley Square</i> .—Between Huntington avenue, Boylston and Dartmouth streets; contains 28,399 square feet; inclosed by a granite curb	131 00	
<i>Fort Hill Square</i> .—Oliver and High streets; contains 29,480 square feet	155 10	
<i>Franklin Square</i> .—Washington, East Brookline, East Newton and James streets; contains 105,205 square feet	516 60	
<i>Massachusetts Avenue</i> .—Between Albany street and Harrison avenue, contains 9,300 square feet; between Harrison avenue and Washington street, contains 13,050 square feet; between Washington and Tremont streets, contains 74,000 square feet; malls inclosed by an iron fence; between Tremont street and Columbus avenue, contains 10,150 square feet	504 92	
<i>Park Square</i> .—Columbus avenue, Eliot and Pleasant streets; contains 2,867 square feet	111 24	
<i>Carried forward</i>	\$2,308 04	\$120,255 87

<i>Brought forward</i>	\$2,308 04	\$120,255 87
<i>Rutland Square.</i> — Between Tremont street and Columbus avenue; contains 7,400 square feet	152 49	
<i>Union Park.</i> — Between Tremont street and Shawmut avenue; contains 16,000 square feet; malls inclosed by iron fence	219 75	
<i>Waltham Square.</i> — Harrison avenue, between Union park and Waltham streets; contains 3,000 square feet	65 50	
<i>Worcester Square.</i> — Between Washington street and Harrrison avenue; contains 16,000 square feet	207 00	
		2,952 78
<i>Brighton District.</i>		
<i>Brighton Square.</i> — Between Chestnut Hill avenue and Rockland street and opposite branch of Public Library; contains 25,035 square feet	\$164 88	
<i>Fern Square.</i> — Between Franklin and Fern streets; contains 1,900 square feet	57 00	
<i>Jackson Square.</i> — Chestnut Hill avenue, Union and Winship streets; contains 4,300 square feet; inclosed by stone curb	68 75	
<i>Sparhawk Square.</i> — Cambridge, Murdock and Sparhawk streets; contains 7,449 square feet	77 18	
		367 81
<i>Charlestown District.</i>		
<i>City Square.</i> — Head of Bow and Main streets; contains 8,739 square feet; inclosed by stone curb and iron fence	\$159 75	
<i>Essex Square.</i> — Essex and Lynde-boro' streets; contains 930 square feet	59 00	
<i>Hayes Square.</i> — Bunker Hill, Vine and Moulton streets; contains 4,484 square feet	312 45	
<i>Sullivan Square.</i> — Main, Cambridge, Sever and Gardner streets; contains 56,428 square feet; inclosed by iron fence	331 37	
<i>Carried forward</i>	\$862 57	\$123,576 46

<i>Brought forward</i>	\$862 57	\$123,576 46
<i>Winthrop Square.</i> —Winthrop, Common and Adam streets; contains 38,450 square feet; inclosed by an iron fence; Soldiers' Monument on this square	208 77	
		1,071 34
<i>Dorchester District.</i>		
<i>Adams Square.</i> —Junction Adams and Granite streets; contains 2,068 square feet	\$40 00	
<i>Algonquin Square.</i> —Algonquin and Bradlee streets; contains 1,728 square feet	50 00	
<i>Carruth Square.</i> —Junction Adams and Codman streets; contains 700 square feet	40 00	
<i>Drohan Square.</i> —Old Edison Green; contains 10,241 square feet	67 53	
<i>Eaton Square.</i> —Adams and Bowdoin streets; contains 13,280 square feet	299 22	
<i>Florida Street.</i> —Between King street and Rosemont road; contains 3,300 square feet; between Rosemont road and Lonsdale street, contains 2,790 square feet, ...	38 50	
<i>Magnolia Street.</i> —Contains 3,605 square feet	42 50	
<i>Meeting House Hill.</i> —Contains 56,200 square feet; Soldiers' Monument on this square	239 50	
<i>Mt. Bowdoin Green.</i> —Top of Mt. Bowdoin; contains 25,170 square feet	195 50	
<i>Peabody Square.</i> —Ashmont; contains 1,963½ square feet	32 51	
<i>Richardson Square.</i> —Between Pond and Cottage streets; contains 45,982 square feet	156 80	
<i>Spaulding Square.</i> —Junction Freeport street and Neponset avenue, ...	27 50	
<i>Tremlett Park.</i> —Tremlett street, between Hooper and Waldeck streets; contains 7,107 square feet, ...	104 90	
		1,334 46
<i>Carried forward</i>		\$125,982 26

Brought forward \$125,982 26

East Boston District.

Belmont Square.— Webster, Sumner, Lamson and Seaver streets; contains 30,000 square feet; inclosed by an iron fence \$185 25

Central Square.— Meridian and Border streets; contains 40,310 square feet; inclosed by stone curb 222 01

Maverick Square.— Sumner and Maverick streets 93 25

Prescott Square.— Trenton, Eagle and Prescott streets; contains 12,284 square feet 112 37

Putnam Square.— Putnam, White and Trenton streets; contains 11,628 square feet: inclosed by an iron fence 124 00

736 88

Roxbury District.

Bromley Park.— From Albert to Bickford street; contains 20,975 square feet; three inclosures \$205 98

Cedar Square.— Cedar street, between Juniper and Thornton streets; contains 26,163 square feet 157 04

Elm Hill Park.— Off 550 Warren street; contains 6,920 square feet, ... 58 10

Fountain Square.— Walnut avenue, from Munroe to Townsend street; contains 116,000 square feet 152 65

Harold Square.— Abbotsford, Crawford and Harold streets; contains 966 square feet 34 25

Heath Square.— Old Heath, New Heath and Parker streets; contains 2,419 square feet; inclosed by iron fence 35 00

Highland Park.— Fort avenue; contains 114,065 square feet; occupied partly by Roxbury standpipe 258 00

Lewis Park.— Highland street and Highland avenue; contains 5,600 square feet 45 50

Carried forward \$946 52 \$126,719 14

<i>Brought forward</i>	\$946 52	\$126,719 14
<i>Linwood Park</i> .—Centre and Linwood streets; contains 3,625 square feet; inclosed by stone curb	64 00	
<i>Longwood Park</i> .—Park and Austin streets; contains 21,000 square feet	196 82	
<i>Madison Square</i> .—Sterling, Marble, Warwick and Westminster streets; contains 122,191 square feet	553 10	
<i>Orchard Park</i> .—Chadwick, Orchard Park and Yeoman streets; contains 104,492 square feet	470 61	
<i>Walnut Park</i> .—Between Washington street and Walnut avenue; contains 5,736 square feet	64 50	
<i>Warren Square</i> .—Warren, St. James and Regent streets; contains 1,380 square feet; inclosed by granite curb	49 30	
<i>Washington Park</i> .—Dale and Bainbridge streets; contains 396,125 square feet	829 82	
		3,174 67

South Boston District.

<i>Independence Square</i> .—Broadway, Second, M and N streets; contains 6½ acres; inclosed by shrubbery hedge	\$769 64	
<i>Lincoln Square</i> .—Emerson, Fourth and M streets; contains 9,510 square feet; inclosed by an iron fence	143 00	
<i>Telegraph Hill</i> .—Thomas park; contains 234,925 square feet, inclosed by iron fence	1,045 00	
		1,957 64

West Roxbury District.

<i>Centre Square</i> .—Centre and Perkins streets; contains 3,200 square feet	\$47 25	
<i>Fairview Street</i> .—South Conway, South Fairview and Robert streets; contains 750 square feet, ...	43 25	
<i>Carried forward</i>	\$90 50	\$131,851 45

<i>Brought forward</i>	\$90 50	\$131,851 45
<i>Oak View Terrace</i> .— Off Centre street; contains 5,287 square feet,	71 75	
<i>Soldiers' Monument Lot</i> .— Centre and South streets	46 75	
		209 00
		<u>\$132,060 45</u>

SPECIAL APPROPRIATION.

Highland Park, Improvement of.

New window frames and repairing iron door, etc.,	<u>\$112 09</u>
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RECAPITULATION.

Public Grounds Department	\$132,060 45
Highland Park, Improvement of	112 09
	<u>\$132,172 54</u>

List of fountains, statues and monuments in charge of the Superintendent of Public Grounds:

One fountain each on Franklin, Blackstone, Worcester, Independence, Central and Sullivan squares, Union park and Massachusetts avenue, formerly Chester park; Lyman fountain, Eaton square; Brewer fountain, Common; "Maid of the Mist," with wooden coverings for same and three fountains, Public Garden.

Statues and Monuments.—Statues of Edward Everett, Washington, Charles Sumner and Colonel Cass, Japanese lantern, Public Garden; Benjamin Franklin and Josiah Quincy, in front of City Hall; Samuel Adams, Adams square, and John Winthrop, formerly on Scollay square, now on Marlborough street, adjoining First Church; Emancipation Group, Park square; General Joseph Warren, Warren street; Ether and Channing monuments, Public Garden; Soldiers' and Sailors' monument, Monument Hill, Boston Common; Soldiers' monument, Winthrop square, Charlestown District; Soldiers' monument, junction Centre and South streets, West Roxbury District; Soldiers' monument, Meeting House Hill, Dorchester District; Crispus Attucks and Shaw monuments, Boston Common.

Respectfully submitted,

D. H. SULLIVAN,
Superintendent.





ANNUAL REPORT
OF THE
REGISTRY DEPARTMENT.

BOSTON, MASS., April 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— In compliance with the ordinance, I beg leave to report that, according to our books there were recorded for the year 1908—

- 18,457 births { including 949 children of nonresident parents.
 { Males, 9,423; females, 9,034.
- 6,993 marriages solemnized in this city.
- 1,743 marriages of residents solemnized out of this city.
- 1,138 residents of Boston married outside of Boston in Massachusetts.
- 605 residents of Boston married outside the state.
- 7,798 marriage licenses issued for the calendar year.
- 11,758 deaths in the city, including 1,243 nonresidents.
- 698 residents of Boston who died elsewhere.
- 637 stillborn infants.

MARRIAGE LICENSES ISSUED, 1908.

January	599	July	575
February	570	August	613
March	454	September	769
April	570	October	863
May	573	November	728
June	943	December	541
Total			<u>7,798</u>
Licenses issued 1906	8,316		
Licenses issued 1907	8,654		

RECEIPTS AND EXPENDITURES.

RECEIPTS.

Cash on hand February 1, 1908 (City Document No. 35)	\$874 00
Received for marriage licenses from February 1, 1908, to January 31, 1909, inclusive:	
Nos. 600 to 1,538 of 1908 = 939 @ \$0.50 = \$469 50	
Nos. *1,539 to 7,798 of 1908 = 6,260 @ 1.00 = 6,260 00	
Nos. 1 to 551 of 1909 = 551 @ 1.00 = 551 00	
	<u>7,280 50</u>
	<u><u>\$8,154 50</u></u>

EXPENDITURES.

Paid physicians for 18,038 births, at 25 cents, reported from February 1, 1908, to January 31, 1909, inclusive, as per vouchers paid in by me to the Auditor, and receipted for by him, viz.:

February	1,564 births at 25c.	\$391 00
March	1,230 "	307 50
April	1,256 "	314 00
May	1,327 "	331 75
June	1,503 "	375 75
July	1,406 "	351 50
August	1,152 "	288 00
September	1,293 "	323 25
October	1,732 "	433 00
November	1,541 "	385 25
December	1,939 "	484 75
January, 1909	2,095 "	523 75
	<u>18,038 =</u>	<u>\$4,509 50</u>
By City Collector		2,818 00
Cash balance February 1, 1909		827 00
		<u><u>\$8,154 50</u></u>

SPECIAL RECEIPTS AND EXPENDITURES.

Received for certificates, for court, bank, insurance and other purposes	<u>\$620 75</u>
Paid City Collector, as per receipt	<u>\$620 75</u>

Respectfully submitted,

E. W. McGLENEN,
City Registrar.

* License fee increased to \$1 March 28, 1908.

APPROPRIATION 1908-09.

<i>Dr.</i>					<i>Cr.</i>
To Appropriation	.	.	\$37,000 00	By	Salaries \$27,143 53
					Printing and Binding . 3,908 62
					Collecting Births and
					Tabulating . . . 1,715 95
					Stationery . . . 1,711 52
					Sundries . . . 509 32
					Balance . . . 2,011 06
			<u>\$37,000 00</u>		<u>\$37,000 00</u>

THE MORTALITY OF THE CITY OF BOSTON IN 1908.

There were 11,756* deaths recorded by this department in 1908, or 48 more than in 1907, or about .41 per cent.

The following table, based upon estimates of the population of the city furnished by the State Bureau of the Statistics of Labor for the year 1908, will show the mortality in different classes of the population, and the death rate of each.

The death rate, based upon the whole number of deaths occurring in the city was 18.70; if the death rate be based upon the mortality of *residents* only, it was 16.033 per thousand of population.

	* Population, 1908.	Deaths, 1908.	To Popu- lation, one Death in every	Deaths in Each 1,000 of Popula- tion.
Population of Boston	628,483	†11,756	53	18.70
Males	306,448	6,198	49	20.22
Females	322,035	5,558	59	17.25
White	616,383	11,389	54	18.47
Colored	12,100	367	33	30.33
Native born	407,068	7,687	51	18.85
Foreign born	221,415	3,633	61	16.41
Native parentage	212,483	3,944	53	18.56
Foreign parentage	416,000	7,012	59	16.85

* All population figures are estimated.

† Two deaths were added to the number after some of the tables had been compiled, making the total, 11,758. One was an unknown man, whose body was found in Charles river, about forty-five years old, a case of accidental drowning. The other was a female child, eleven months and twenty-one days old, born in Boston of native parents; cause of death, convulsions, etc.

TOTAL MORTALITY: RESIDENTS, NONRESIDENTS AND UNKNOWN.

Sex.—Decedents were divided as to sex as follows: Males, 6,198; females, 5,558.

The whole number of deaths of residents was 10,077; there were 5,214 males and 4,863 females.

The nonresident deaths were 1,243; 718 males and 525 females.

There were 436 decedents of unknown residence; 266 males and 170 females.

There were 637 stillborn infants, which are not included in the total number of deaths as given above.

Table I. shows the total population of each ward, the number of deaths in each, the per cent of deaths to total mortality

of residents, the per cent of mortality to the population of the ward, number of deaths under one year in each ward and the number of deaths under five years; also the percentage of these deaths in each ward to the total mortality of the city in these classes.

TABLE I.

[Estimated Population 628,483.]

WARDS.	Population, 1908.	Deaths, 1908.	Per cent of Whole Number of Deaths.*	Per cent of Ward Population.	One in Every.	Deaths under One Year.	Per cent of Whole Number of Deaths under One Year.*	Deaths under Five Years.	Per cent of Whole Number of Deaths under Five Years.
1.....	26,836	424	4.2	1.5	63	115	5+	160	4.8
2.....	27,339	430	4.2	1.5	63	130	5.6	185	5.6
3.....	15,649	280	2.7	1.7	55	56	2.4	91	2.7
4.....	13,198	225	2.2	1.7	58	42	1.8	70	2.1
5.....	13,387	254	2.5	1.8	52	54	2.3	78	2.3
6.....	31,676	655	6.5	2+	48	234	10.2	369	11.1
7.....	16,466	354	3.5	2.1	46	78	3.4	126	3.7
8.....	32,493	409	4.0	1.2	79	94	4.1	156	4.6
9.....	23,317	455	4.5	1.9	51	104	4.5	142	4.2
10.....	25,139	307	3.0	1.2	81	46	2+	70	2.1
11.....	23,568	280	2.7	1.1	84	30	1.3	49	1.4
12.....	22,940	354	3.5	1.5	64	48	2+	74	2.2
13.....	22,877	486	4.8	2.1	47	150	6.5	212	6.3
14.....	23,380	389	3.8	1.6	60	92	4.0	137	4.1
15.....	21,431	357	3.5	1.6	60	93	4.0	124	3.7
16.....	23,128	334	3.3	1.4	69	70	3.0	102	3.0
17.....	25,642	499	4.9	1.9	51	117	5.1	170	5.1
18.....	23,380	444	4.4	1.9	52	125	5.4	176	5.3
19.....	30,859	477	4.7	1.5	64	103	4.4	146	4.4
20.....	44,119	579	5.7	1.3	76	100	4.3	129	3.8
21.....	28,030	431	4.2	1.5	65	72	3.1	95	2.8
22.....	29,287	460	4.5	1.5	63	94	4.5	138	4.1
23.....	27,905	390	3.8	1.4	71	66	2.9	98	2.9
24.....	33,435	446	4.4	1.3	68	102	4.0	130	3.9
25.....	23,002	302	2.9	1.3	76	62	2.7	88	2.6

* Of residents only.

TABLE II.—DEATHS RECORDED IN BOSTON, BY WARDS AND AGE PERIODS: RESIDENTS, NONRESIDENTS AND UNKNOWN.

WARDS.	TOTAL, BOTH SEXES.	TOTAL, EACH SEX.		UNDER 1 YEAR.		1 TO 2.		2 TO 5.		TOTAL UNDER 5 YEARS.		5 TO 9.		10 TO 14.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	424	220	204	64	51	8	13	12	12	84	76	7	5	1	4
2.....	430	235	195	77	53	16	15	11	13	104	81	8	6	9	4
3.....	280	140	140	31	25	8	7	7	13	46	45	6	3	1	4
4.....	225	118	107	21	21	9	3	4	12	34	36	8	4	3	...
5.....	254	138	116	31	23	7	8	5	4	43	35	3	2	3	4
6.....	655	359	296	127	107	44	47	24	20	195	174	6	12	4	4
7.....	354	196	158	35	43	13	9	12	14	60	66	2	2	1	2
8.....	409	232	177	61	33	18	20	16	8	95	61	8	5	2	...
9.....	455	263	192	68	36	12	6	11	9	91	51	4	4	4	...
10.....	307	139	168	26	20	5	4	4	1	35	25	2	2	...	3
11.....	280	119	161	18	12	6	2	7	4	31	18	6	3	2	1
12.....	354	182	172	31	17	11	6	3	6	45	29	2	1	...	...
13.....	486	267	219	88	70	17	12	12	13	117	95	7	3	3	3
14.....	389	206	183	49	43	14	11	10	10	73	64	4	1	3	...
15.....	357	170	187	47	46	9	7	8	7	64	60	5	4	1	2
16.....	334	170	164	36	34	6	6	10	10	52	50	2	2	...	1
17.....	499	248	251	64	53	14	16	9	14	87	83	6	7	2	5
18.....	444	242	202	68	57	14	16	11	10	93	83	9	4	7	2
19.....	477	221	256	52	51	11	8	10	14	73	73	12	3	...	6
20.....	579	284	295	60	40	8	7	9	5	77	52	9	6	4	...
21.....	431	230	201	42	30	9	5	6	3	57	38	4	2	1	2
22.....	460	237	223	53	41	8	11	16	9	77	61	6	6	2	7
23.....	390	195	195	40	26	3	8	14	7	57	41	4	3	6	1
24.....	446	223	223	66	36	5	11	11	1	82	48	5	5	3	5
25.....	302	152	150	32	30	3	3	12	8	47	41	6	4	2	2
Ward unknown..	56	28	28	7	.....	1	1	3	1	11	2	....	....	....	....
Total residents, each sex.....	.....	5,214	4,863	1,294	998	279	262	257	228	1,830	1,488	141	99	64	62
Both sexes.....	10,077	10,077		2,292		541		485		3,318		240		126	
Nonresidents....	1,243	718	525	118	93	23	26	19	20	160	139	15	15	10	6
Unknown.....	436	266	170	132	100	17	14	8	6	157	120	....	1	...	1
Totals, each sex, .....	.....	6,198	5,558	1,544	1,191	319	302	284	254	2,147	1,747	156	115	74	69
Totals, both sexes,	11,756	11,756		2,735		621		538		3,894		271		143	

TABLE II., *Continued.*—DEATHS RECORDED IN BOSTON, BY WARDS AND AGE PERIODS: RESIDENTS, NONRESIDENTS AND UNKNOWN.

WARDS.	15 TO 19.		20 TO 24.		25 TO 29.		30 TO 34.		35 TO 39.		40 TO 44.		45 TO 49.		50 TO 54.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	6	2	10	8	12	7	8	8	3	6	4	7	14	9	7	12
2.....	5	....	2	9	4	8	12	4	13	10	9	8	5	5	14	8
3.....	2	3	1	5	8	5	6	3	4	6	12	9	9	8	6	5
4.....	4	1	4	4	3	2	4	4	3	7	7	7	6	2	12	5
5.....	1	6	3	4	6	3	6	3	9	7	8	8	13	4	6	10
6.....	11	9	13	9	10	5	9	12	10	6	20	4	12	8	12	7
7.....	4	2	8	4	12	6	8	3	13	6	15	4	16	4	12	8
8.....	4	3	7	7	11	11	7	10	11	5	11	9	9	16	13	4
9.....	4	3	6	6	12	6	14	12	18	9	14	20	19	7	20	9
10.....	2	2	5	9	4	11	12	5	11	13	3	5	15	13	5	9
11.....	1	2	4	2	3	10	1	7	3	10	6	9	1	8	7	12
12.....	4	2	5	4	11	9	5	8	17	9	12	10	10	9	9	3
13.....	4	6	13	6	7	6	17	11	17	12	10	12	19	5	15	9
14.....	5	5	7	1	7	3	9	4	14	6	16	11	8	16	12	13
15.....	6	4	7	7	9	5	4	4	7	11	13	8	11	9	8	7
16.....	2	3	5	4	3	5	7	5	8	6	10	7	12	10	13	9
17.....	6	7	10	8	7	10	15	21	12	12	13	15	14	11	15	7
18.....	4	3	7	4	6	5	9	7	16	8	11	13	10	12	15	10
19.....	4	1	3	8	7	12	13	12	17	1	16	10	10	15	14	18
20.....	5	9	5	5	13	24	8	6	13	15	12	18	12	12	12	21
21.....	1	3	7	3	11	4	5	6	3	7	5	7	16	11	8	14
22.....	8	4	12	5	5	10	11	9	9	7	13	13	12	11	10	10
23.....	4	6	11	5	8	5	5	8	12	11	7	9	6	8	7	10
24.....	5	4	10	9	7	11	10	9	4	11	5	10	12	7	6	13
25.....	8	2	6	2	3	9	9	5	6	4	8	9	11	7	5	7
Ward unknown...	....	....	1	1	....	....	....	....	1	1	5	1	1	....	1	....
Total residents, each sex.....	110	92	172	139	189	192	214	186	254	206	265	243	283	227	264	240
Both sexes.....	202		311		381		400		460		508		510		504	
Nonresidents.....	20	17	30	34	34	26	45	32	53	26	44	27	48	33	50	34
Unknown.....	3	1	3	1	12	8	14	4	11	6	15	5	16	3	9	3
Totals, each sex..	133	110	205	174	235	226	273	222	318	238	324	275	347	263	323	277
Totals, both sexes,	243		379		461		495		556		599		610		600	

TABLE II., *Concluded*.—DEATHS RECORDED IN BOSTON, BY WARDS AND AGE PERIODS: RESIDENTS, NONRESIDENTS AND UNKNOWN.

WARDS.	55 TO 59.		60 TO 64.		65 TO 69.		70 TO 74.		75 TO 79.		80 TO 84.		85 TO 89.		90 TO 94.		95 AND OVER.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	14	9	12	10	14	5	9	16	12	7	3	10	...	2	...	1	...	...
2.....	11	7	13	11	9	14	6	8	7	4	1	3	2	3	1	2	...	...
3.....	9	5	4	13	8	7	10	7	4	9	2	2	2	...	...	1	...	...
4.....	6	4	5	6	7	5	7	8	2	8	2	1	...	2	1	1	...	...
5.....	4	7	13	6	5	4	3	4	4	5	2	2	4	1	1	1	1	...
6.....	14	9	8	9	14	11	10	8	6	5	5	2	...	2	...	...	...	...
7.....	10	7	6	11	9	12	10	13	3	4	6	1	1	3	...	...	...	...
8.....	11	14	11	13	13	8	12	2	2	4	3	5	2	...	...	...	...	...
9.....	13	13	14	12	11	10	6	12	6	7	6	6	...	4	1	1	...	...
10.....	6	13	9	10	10	13	7	8	9	15	2	6	1	4	...	2	1	...
11.....	10	8	7	10	13	12	10	13	4	18	5	8	3	7	2	1	...	2
12.....	9	14	21	17	11	13	9	14	4	18	3	8	2	3	3	1	...	...
13.....	9	7	9	15	8	4	6	12	...	7	2	3	2	2	2	1	...	...
14.....	11	10	9	10	13	13	7	7	2	6	5	8	1	5	...	...	...	...
15.....	8	13	8	8	7	20	5	11	2	9	5	4	...	1	...	...	...	...
16.....	13	9	9	10	11	4	13	15	4	7	5	10	1	6	...	1	...	...
17.....	14	9	15	12	18	10	9	9	2	6	3	11	...	8	...	...	...	...
18.....	15	4	8	15	5	8	11	11	8	4	4	3	2	5	2	1	...	...
19.....	7	22	19	18	10	19	5	13	5	12	3	10	3	3	...	...	...	...
20.....	24	20	19	18	19	18	13	21	18	17	11	13	6	14	3	6	1	...
21.....	23	14	13	15	22	21	17	15	16	13	14	9	7	13	...	2	...	2
22.....	17	15	14	18	13	15	12	7	13	10	2	9	1	4	...	2	...	...
23.....	8	8	13	21	11	12	10	10	17	12	6	12	2	9	1	3	...	1
24.....	9	14	10	17	17	13	19	15	13	15	3	11	3	4	...	1	...	1
25.....	8	7	9	10	8	6	7	9	4	12	3	7	2	6	...	1	...	...
Ward unknown..	2	2	...	1	3	6	...	3	1	4	...	3	...	2	2	2	...	...
Total residents, each sex.....	285	264	278	316	289	283	233	271	168	238	106	167	47	113	19	31	3	6
Both sexes.....	549		594		572		504		406		273		160		50		9	
Nonresidents....	56	32	39	38	38	21	35	20	29	10	8	10	4	3	...	1	...	1
Unknown.....	7	2	5	2	8	2	3	2	...	2	3	3	...	3	...	...	...	1
Totals, each sex..	348	298	322	356	335	306	271	293	197	250	117	180	51	119	19	32	3	8
Totals, both sexes,	646		678		641		564		447		297		170		51		11	

TABLE III.—DEATHS OF COLORED PERSONS (ALL OTHER THAN WHITE) RECORDED IN BOSTON: RESIDENTS BY WARDS, NON-RESIDENTS AND UNKNOWN, BY AGE PERIODS, 1908.

WARDS.	TOTAL, BOTH SEXES.	TOTAL, EACH SEX.		UNDER 1 YEAR.		1 TO 2.		2 TO 5.		5 TO 9.		10 TO 14.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....													
2.....													
3.....													
4.....	2	1	1	1									
5.....	1	1											
6.....													
7.....	26	{*16 7}	3	3	1			{*1 1}	1				
8.....	10	7	3	2		1	1			1			
9.....	26	15	11	4	2	1		2	2		1		
10.....	31	10	21	1	2		1						
11.....	34	{*2 18}	14	4		1		1	1	1			
12.....	46	{*1 18}	27	3	5	3	1	1	2				
13.....													
14.....													
15.....													
16.....	1	1											
17.....	27	9	18	1	4	1	5		1		1		1
18.....	108	60	48	19	14	8	7	4	4	2	1	3	
19.....	3		3		1								1
20.....	1		1										
21.....													
22.....	6	2	4	1	1	1							1
23.....													
24.....	2		2		1								
25.....	5	1	4						1		1		
Ward unknown.....													
Total residents, each sex.....	329	{*19 150}	160	39	31	16	15	{*1 9}	12	4	4	3	3
Both sexes.....		329		70		31		22		8		6	
Nonresidents.....	28	12	16	5	3		1				2		1
Unknown.....	10	{*1 3}	6	1	2								
Totals, each sex.....		{*20 165}	182	45	36	16	16	{*1 9}	12	4	6	3	4
Totals, both sexes.....	367	367		81		32		22		10		7	

* Chinese.

TABLE III., *Continued.*— DEATHS OF COLORED PERSONS (ALL OTHER THAN WHITE) RECORDED IN BOSTON: RESIDENTS, BY WARDS, NONRESIDENTS AND UNKNOWN, BY AGE PERIODS, 1908.

WARDS.	15 TO 19.		20 TO 24.		25 TO 29.		30 TO 34.		35 TO 39.		40 TO 44.		45 TO 49.		50 TO 54.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....																
2.....																
3.....																
4.....																
5.....													1			
6.....																
7.....	{ *1 1 }		*2		*4		*1		{ *1 2 }		*1		*3	1		
8.....					1							1	1	1		
9.....			2		1				2	1	1	1				
10.....	2	1		3		3	2	1	2	2		1	1	3		
11.....			*1	1	*1	3	1	2	2		1		1	1		
12.....			1	2	{ *1 1 }	3	2	3	1	1	1	1		1		
13.....																
14.....																
15.....																
16.....																
17.....			1	1		1	3	1				2				
18.....	1	1	1	2	2		1	2	1	2	2	4	2	1		
19.....														1		
20.....								1								
21.....																
22.....		1		1												
23.....																
24.....																
25.....	1													1		
Ward unknown,																
Total residents, { each sex.....	{ *1 5 }	3	{ *3 5 }	10	{ *6 5 }	10	{ *1 9 }	10	{ *1 10 }	6	{ *1 5 }	10	{ *3 6 }	10		
Both sexes.....	9		18		21		20		17		16		19			
Nonresidents.....					{ *1 1 }	1	2	1		1		1	1			
Unknown.....						1										
Totals, each sex, {	{ *1 5 }	3	{ *3 5 }	10	{ *7 6 }	12	{ *1 11 }	11	{ *1 10 }	7	{ *1 5 }	11	{ *3 7 }	10		
Totals, both sexes.....	9		18		25		23		18		17		20			

* Chinese.

TABLE III., *Concluded*.— DEATHS OF COLORED PERSONS (ALL OTHER THAN WHITE) RECORDED IN BOSTON: RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN, BY AGE PERIODS, 1908.

WARDS.	55 TO 59.		60 TO 64.		65 TO 69.		70 TO 74.		75 TO 79.		80 TO 84.		85 TO 89.		90 TO 94.		95 AND OVER.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....																		
2.....																		
3.....																		
4.....		1																
5.....																		
6.....																		
7.....	*1																	
8.....			1															
9.....		1	1	1				1										
10.....		1					1		1				1					
11.....	1			1	4	1	1	1										1
12.....	1	4	3	1		2			1									
13.....																		
14.....																		
15.....																		
16.....							1											
17.....	1							1										
18.....	6	3	1				1	3	1				1					
19.....																		
20.....																		
21.....																		
22.....																		
23.....																		
24.....																		
25.....		1							1									
Ward unknown.....																		
Total residents, each sex.....	{*1 9}		11	6	3	7	3	4	6	1	3			2				1
Both sexes.....	21		9		10		10		4		2		1					
Nonresidents.....	1	1	1		2	2		2										
Unknown.....						1					1							1
Totals, each sex....	{*1 10}		12	7	3	9	6	4	8	1	3		1		2			2
Totals, both sexes....	23		10		15		12		4		1		2				2	

TABLE IV.—DEATHS: CONJUGAL CONDITION OF DECEDENTS BY AGE PERIODS. RESIDENTS OF BOSTON.

AGE PERIOD.	SINGLE.		MARRIED.		WIDOWED.		DIVORCED.		UNKNOWN.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	1,294	998	.....	.....	.....	.....	.....	.....	.....	.....
1 to 2 years....	279	262	.....	.....	.....	.....	.....	.....	.....	.....
2 to 4 "	257	228	.....	.....	.....	.....	.....	.....	.....	.....
5 to 9 "	141	99	.....	.....	.....	.....	.....	.....	.....	.....
10 to 14 "	64	62	.....	.....	.....	.....	.....	.....	.....	.....
15 to 19 "	108	82	1	10	.....	.....	.....	.....	1	.....
20 to 24 "	149	82	22	53	.....	2	.....	.....	1	2
25 to 29 "	126	84	60	101	3	5	.....	1	.....	1
30 to 34 "	107	47	94	120	10	17	3	.....	.....	2
35 to 39 "	106	43	136	148	9	13	2	2	1	.....
40 to 44 "	74	43	178	164	10	34	2	1	1	1
45 to 49 "	61	45	197	127	23	50	1	3	1	2
50 to 54 "	56	43	169	128	35	66	2	2	2	1
55 to 59 "	48	43	185	126	49	92	3	2	.....	1
60 to 64 "	26	55	189	108	58	148	2	4	3	1
65 to 69 "	19	51	170	64	96	164	2	2	2	2
70 to 74 "	26	37	141	50	65	182	1	.....	.....	2
75 to 79 "	11	33	82	33	73	172	2	.....	.....	.....
80 to 84 "	4	24	50	16	50	126	2	1	.....	.....
85 to 89 "	1	16	18	3	28	94	.....	.....	.....	.....
90 to 94 "	1	5	7	.....	11	26	.....	.....	.....	.....
95 and over.....	.....	.....	1	1	2	5	.....	.....	.....	.....
Totals, each sex...	2,958	2,382	1,700	1,252	522	1,196	22	18	12	15
Totals, both sexes..	5,340		2,952		1,718		40		27	

TABLE IV., *Continued.*—DEATHS: CONJUGAL CONDITION OF DECEDENTS BY AGE PERIODS. NONRESIDENTS.

AGE PERIOD.	SINGLE.		MARRIED.		WIDOWED.		DIVORCED.		UNKNOWN.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	118	93								
1 to 2 years.....	23	26								
2 to 4 "	19	20								
5 to 9 "	15	15								
10 to 14 "	10	6								
15 to 19 "	20	17								
20 to 24 "	24	22	5	11		1				
25 to 29 "	25	12	9	14						
30 to 34 "	23	8	21	21	1	3				
35 to 39 "	27	6	22	17	2	3	1		1	
40 to 44 "	5	5	32	18	6	3		1	1	
45 to 49 "	6	5	37	19	4	8	1	1		
50 to 54 "	9	6	36	21	5	7				
55 to 59 "	7	4	44	17	5	10		1		
60 to 64 "	2	7	30	23	6	8			1	
65 to 69 "	3	3	25	6	8	11		1	2	
70 to 74 "	5	1	20	5	9	14			1	
75 to 79 "	6	1	10		13	9				
80 to 84 "		1	3		5	9				
85 to 89 "	1		1		2	3				
90 to 94 "						1				
95 and over.....						1				
Totals, each sex...	348	258	295	172	66	91	2	4	6	
Totals, both sexes..	606		467		157		6		6	

TABLE IV., *Concluded*.—DEATHS: CONJUGAL CONDITION OF DECEDENTS BY AGE PERIODS. RESIDENCE UNKNOWN.

AGE PERIOD.	SINGLE.		MARRIED.		WIDOWED.		DIVORCED.		UNKNOWN.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	132	100	.....	.....	.....	.....	.....	.....	.....	.....
1 to 2 years.....	17	14	.....	.....	.....	.....	.....	.....	.....	.....
2 to 4 “.....	8	6	.....	.....	.....	.....	.....	.....	.....	.....
5 to 9 “.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
10 to 14 “.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
15 to 19 “.....	1	.....	.....	1	.....	.....	.....	.....	2	.....
20 to 24 “.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1
25 to 29 “.....	2	.....	.....	.....	.....	.....	.....	.....	10	8
30 to 34 “.....	2	.....	.....	1	.....	.....	.....	.....	12	3
35 to 39 “.....	.....	.....	.....	1	.....	1	.....	.....	11	4
40 to 44 “.....	2	1	.....	.....	.....	.....	1	.....	12	4
45 to 49 “.....	1	1	1	.....	2	.....	.....	.....	12	2
50 to 54 “.....	1	2	1	.....	.....	.....	.....	.....	7	1
55 to 59 “.....	1	.....	.....	1	.....	.....	.....	.....	6	1
60 to 64 “.....	.....	.....	.....	.....	.....	.....	.....	.....	5	2
65 to 69 “.....	1	1	.....	.....	1	1	.....	.....	6	.....
70 to 74 “.....	.....	.....	.....	.....	.....	2	1	.....	2	.....
75 to 79 “.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
80 to 84 “.....	.....	.....	1	.....	.....	2	.....	.....	2	1
85 to 89 “.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
90 to 94 “.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Totals, each sex...	168	127	3	4	3	12	2	.....	90	27
Totals, both sexes.	295		7		15		2		117	

TABLE V.—DEATHS BY MONTHS, RESIDENTS BY WARDS: NONRESIDENTS AND UNKNOWN.

WARDS.	January.		February.		March.		April.		May.		June.		July.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	15	20	17	10	11	18	29	19	30	24	12	13	28	12
2.....	28	16	15	21	16	13	24	23	18	14	10	13	26	19
3.....	9	16	10	7	10	11	15	11	16	14	9	11	9	9
4.....	13	10	8	5	11	8	9	8	15	5	8	8	7	13
5.....	13	12	14	13	14	5	5	12	8	9	11	7	14	15
6.....	34	19	39	24	35	18	30	28	31	36	25	29	29	16
7.....	16	12	18	14	25	19	26	12	18	15	8	9	12	8
8.....	22	12	11	11	26	13	20	23	26	21	13	15	21	10
9.....	33	15	22	14	22	19	22	17	26	14	23	17	20	19
10.....	13	9	24	10	13	18	13	14	9	11	11	9	7	16
11.....	8	21	7	16	14	16	12	16	12	14	11	7	9	8
12.....	21	16	18	12	25	21	18	13	16	15	11	17	10	12
13.....	20	17	18	25	26	17	17	14	23	19	14	13	30	26
14.....	19	18	26	16	18	9	18	23	18	14	14	5	20	18
15.....	18	18	13	20	12	13	11	18	10	17	7	4	20	13
16.....	12	11	7	16	14	13	23	14	9	17	16	6	15	15
17.....	25	26	21	24	23	20	16	24	27	14	13	21	33	16
18.....	21	18	18	15	25	14	15	24	18	27	19	11	22	11
19.....	19	30	18	24	21	16	22	17	16	20	17	16	14	18
20.....	27	36	29	25	27	28	23	27	22	27	27	26	18	14
21.....	21	10	19	23	28	30	24	15	12	19	10	15	17	16
22.....	22	24	21	12	21	24	23	21	18	18	15	13	16	24
23.....	13	12	19	17	12	26	29	19	14	16	22	12	15	16
24.....	24	17	26	17	20	16	22	21	17	21	10	20	10	17
25.....	15	12	14	18	21	13	13	8	10	20	4	6	8	10
Ward unknown..	2	7	2	1	3	2	4	1	3	1	1	4	3	2
Total residents, each sex.....	483	434	454	410	493	420	483	442	442	442	341	327	433	373
Both sexes.....	917		864		913		925		884		668		706	
Nonresidents.....	65	42	48	32	62	53	57	44	57	54	43	42	59	51
Unknown.....	21	13	22	11	26	13	24	14	31	22	22	14	29	20
Totals, each sex..	569	489	524	453	581	486	564	500	530	518	406	383	521	444
Both sexes.....	1,058		977		1,067		1,064		1,048		789		965	

TABLE V., *Concluded*.—DEATHS BY MONTHS, RESIDENTS BY WARDS:
NONRESIDENTS AND UNKNOWN.

WARDS.	August.		September.		October.		November.		December.		Total, Each Sex.		TOTAL, BOTH SEXES.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
1.....	15	17	20	21	13	16	15	12	15	22	220	204	424
2.....	24	20	17	15	22	13	16	8	19	20	235	195	430
3.....	11	13	21	17	9	9	11	13	10	9	140	140	280
4.....	5	12	16	10	11	7	3	11	12	10	118	107	225
5.....	13	6	9	18	11	8	15	5	11	6	138	116	254
6.....	40	35	28	30	22	17	23	20	23	24	359	296	655
7.....	21	11	15	14	7	11	7	15	23	18	196	158	354
8.....	17	11	16	16	25	14	18	13	17	18	232	177	409
9.....	17	16	28	15	15	15	11	18	24	13	263	192	455
10.....	10	15	9	12	11	22	8	19	11	13	139	168	307
11.....	10	10	11	4	5	10	13	17	7	22	119	161	280
12.....	10	15	18	11	8	15	10	13	17	12	182	172	354
13.....	25	19	16	14	33	24	24	9	21	22	267	219	486
14.....	14	16	16	20	16	13	16	10	11	21	206	183	389
15.....	16	19	18	14	11	15	17	18	17	18	170	187	357
16.....	13	17	8	13	18	14	15	14	20	14	170	164	334
17.....	20	21	14	16	13	23	18	18	25	28	248	251	499
18.....	26	17	10	18	23	18	16	17	29	12	242	202	444
19.....	19	28	24	26	19	16	13	25	19	20	221	256	477
20.....	22	27	25	22	19	20	21	19	24	24	284	295	579
21.....	24	20	22	10	21	13	13	14	19	16	230	201	431
22.....	21	22	16	15	19	17	18	15	27	18	237	223	460
23.....	18	17	11	11	11	19	12	14	19	16	195	195	390
24.....	18	25	20	14	17	17	24	20	15	18	223	223	446
25.....	11	8	14	9	15	13	14	14	13	19	152	150	303
Ward unknown,	4	3	2	2	.....	3	3	2	1	.....	28	28	56
Total residents, each sex.....	444	440	424	387	394	382	374	373	449	433	5,214	4,863	.....
Both sexes.....	884		811		776		747		882		10,077		10,077
Nonresidents...	65	59	71	31	67	42	56	31	68	44	718	525	1,243
Unknown.....	30	20	25	5	16	13	10	14	10	11	266	170	436
Totals, each sex,	539	519	520	423	477	437	440	418	527	488	6,198	5,558	.....
Both sexes.....	1,058		943		914		858		1,015		11,756		11,756

TABLE VI.—DEATHS: BY MONTHS AND AGE PERIODS. TOTAL MORTALITY.

AGE PERIOD.	Totals.		January.		February.		March.		April.		May.		June.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year....	1,544	1,191	118	82	114	83	128	79	117	85	92	84	81	67
1 to 2 years...	319	302	32	26	25	23	25	24	26	27	32	34	22	21
2 to 4 " ..	284	254	28	21	20	15	23	24	35	27	34	33	19	22
5 to 9 " ..	156	115	6	7	16	5	17	10	14	10	13	17	16	9
10 to 14 " ..	74	69	6	5	5	6	7	10	11	7	6	9	6	1
15 to 19 " ..	133	110	12	10	5	10	10	13	17	12	16	10	13	9
20 to 24 " ..	205	174	17	11	19	10	18	11	27	29	17	23	7	15
25 to 29 " ..	235	226	35	19	24	13	16	25	20	23	22	30	14	23
30 to 34 " ..	273	222	18	28	25	14	28	23	19	17	42	21	23	20
35 to 39 " ..	318	238	33	23	26	24	24	28	23	26	29	26	28	7
40 to 44 " ..	324	275	39	27	29	25	33	20	34	34	24	32	17	16
45 to 49 " ..	347	263	32	25	36	21	35	23	42	21	27	18	25	21
50 to 54 " ..	323	277	29	28	28	35	36	32	27	23	28	17	19	17
55 to 59 " ..	348	298	29	25	31	33	53	18	28	19	25	29	23	24
60 to 64 " ..	322	356	25	27	31	35	31	36	32	34	30	29	26	24
65 to 69 " ..	335	306	45	27	27	30	24	26	27	37	41	26	24	24
70 to 74 " ..	271	293	22	32	24	22	34	26	29	26	26	32	22	16
75 to 79 " ..	197	250	26	27	19	29	17	22	18	16	15	22	13	24
80 to 84 " ..	117	180	7	24	14	11	13	25	14	9	8	13	5	11
85 to 89 " ..	51	119	8	9	5	7	7	9	1	14	3	11	2	7
90 to 94 " ..	19	32	2	5	....	2	2	2	2	2	....	....	1	5
95 and over.....	3	8	....	1	1	....	....	....	1	2	....	2	....	....
Totals, each sex,	6,198	5,558	569	489	524	453	581	486	564	500	530	518	406	383
Both sexes.....	11,756		1,058		977		1,067		1,064		1,048		789	

TABLE VI., *Concluded*.—DEATHS: BY MONTHS AND AGE PERIODS.
TOTAL MORTALITY.

AGE PERIOD.	July.		August.		September.		October.		November.		December.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	173	133	237	175	171	123	116	101	99	89	98	90
1 to 2 years....	26	23	32	29	28	20	24	30	21	15	26	30
2 to 4 “	30	21	17	23	24	13	16	12	14	18	24	25
5 to 9 “	18	11	13	10	9	15	12	11	9	5	13	5
10 to 14 “	8	7	3	5	6	2	4	5	6	5	6	7
15 to 19 “	8	8	9	7	9	7	12	7	7	7	15	10
20 to 24 “	21	13	9	12	21	13	13	13	19	6	17	18
25 to 29 “	21	18	17	19	19	10	16	10	12	17	19	19
30 to 34 “	23	16	23	17	21	18	16	18	19	13	16	17
35 to 39 “	21	13	17	17	26	16	29	12	37	22	25	24
40 to 44 “	31	14	22	18	19	18	24	27	21	17	31	27
45 to 49 “	16	13	23	27	23	20	25	22	30	24	33	28
50 to 54 “	24	19	23	13	28	18	27	23	31	22	23	30
55 to 59 “	22	27	19	23	28	26	27	22	22	28	41	24
60 to 64 “	24	24	16	25	21	24	26	29	26	29	34	40
65 to 69 “	18	18	23	26	19	22	35	28	21	23	31	19
70 to 74 “	17	22	11	19	15	19	23	25	16	24	32	30
75 to 79 “	8	23	15	19	14	16	14	12	15	23	23	17
80 to 84 “	7	12	4	17	11	15	14	16	8	14	12	13
85 to 89 “	3	7	3	15	7	7	3	8	5	14	4	11
90 to 94 “	2	2	3	3	1	1	1	4	2	2	3	4
95 and over.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....
Totals, each sex..	521	444	539	519	520	423	477	437	440	418	527	488
Totals, both sexes,	965		1,058		943		914		858		1,015	

TABLE VI. A.—DEATHS: BY MONTHS AND AGE PERIODS.
RESIDENTS OF BOSTON.

AGE PERIOD.	Totals.		January.		February.		March.		April.		May.		June.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year....	1,294	998	101	69	94	78	108	63	100	73	74	64	66	54
1 to 2 years...	279	262	28	26	24	23	19	21	24	25	24	26	20	17
2 to 4 “ ...	257	228	23	20	19	15	21	21	32	23	30	30	16	21
5 to 9 “ ...	141	99	6	6	15	4	17	8	13	10	11	16	16	6
10 to 14 “ ...	64	62	4	4	5	5	7	8	9	7	5	8	5	1
15 to 19 “ ...	110	92	9	8	4	7	8	9	15	10	13	9	7	8
20 to 24 “ ...	172	139	13	7	19	9	13	11	26	24	16	18	6	10
25 to 29 “ ...	189	192	31	13	20	10	11	23	14	19	17	24	13	20
30 to 34 “ ...	214	186	16	25	18	14	23	19	17	13	31	15	20	15
35 to 39 “ ...	254	206	28	20	23	22	18	24	16	21	28	24	24	4
40 to 44 “ ...	265	243	33	25	25	23	31	18	29	29	19	29	15	14
45 to 49 “ ...	283	227	23	20	33	18	28	22	37	19	23	15	20	16
50 to 54 “ ...	264	240	26	25	24	30	30	26	21	21	25	15	14	14
55 to 59 “ ...	285	264	27	24	24	28	44	16	24	18	21	25	17	24
60 to 64 “ ...	278	316	19	24	27	32	27	29	27	31	28	25	23	21
65 to 69 “ ...	289	283	39	26	24	26	23	26	22	33	36	23	20	23
70 to 74 “ ...	233	271	18	31	21	22	30	25	25	25	19	29	20	14
75 to 79 “ ...	168	238	22	25	18	25	15	21	16	16	12	22	11	22
80 to 84 “ ...	106	167	7	22	12	11	12	20	12	8	7	13	5	11
85 to 89 “ ...	47	113	8	8	4	6	6	8	1	14	3	11	2	7
90 to 94 “ ...	19	31	2	5	....	2	2	2	2	1	....	....	1	5
95 and over.....	3	6	....	1	1	....	....	....	1	2	....	1	....	....
Totals, each sex.	5,214	4,863	483	434	454	410	493	420	483	442	442	442	341	327
Both sexes.....	10,077		917		864		913		925		884		668	

TABLE VI. A., *Concluded*.—DEATHS: BY MONTHS AND AGE PERIODS.
RESIDENTS OF BOSTON.

AGE PERIOD.	July.		August.		September.		October.		November.		December.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	149	107	185	138	139	112	98	83	89	76	91	81
1 to 2 years....	24	21	30	25	22	15	22	29	17	12	25	22
2 to 4 "	30	16	16	21	22	12	16	11	13	16	19	22
5 to 9 "	16	7	11	10	7	14	11	9	9	4	9	5
10 to 14 "	8	7	2	5	6	2	3	5	5	5	5	5
15 to 19 "	6	8	9	6	8	7	10	6	6	5	15	9
20 to 24 "	17	9	7	10	16	11	9	12	16	5	14	13
25 to 29 "	19	15	15	17	13	9	11	9	12	15	13	18
30 to 34 "	15	13	18	15	14	15	13	14	15	12	14	16
35 to 39 "	10	11	14	14	21	13	24	10	29	21	19	22
40 to 44 "	24	13	18	17	18	17	16	22	15	15	22	21
45 to 49 "	12	12	20	21	17	17	21	21	22	21	27	25
50 to 54 "	20	14	20	9	21	18	19	22	25	20	19	26
55 to 59 "	15	24	16	18	23	24	20	16	17	24	37	23
60 to 64 "	21	21	11	22	20	23	22	25	24	27	29	36
65 to 69 "	14	14	22	24	15	22	30	26	18	21	26	19
70 to 74 " ...	14	20	8	17	14	17	20	22	16	21	28	28
75 to 79 "	7	22	12	19	12	16	11	11	13	23	19	16
80 to 84 "	7	10	4	16	9	15	14	16	6	13	11	12
85 to 89 "	3	7	3	13	6	7	3	8	5	14	3	10
90 to 94 "	2	2	3	3	1	1	1	4	2	2	3	4
95 and over.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Totals, each sex...	333	373	344	440	324	387	404	382	374	373	449	433
Totals, both sexes,	706		784		711		792		747		882	

TABLE VI. B.—DEATHS: BY MONTHS AND AGE PERIODS.
NONRESIDENTS.

AGE PERIOD.	January.		February.		March.		April.		May.		June.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	4	6	9	1	7	12	6	3	7	6	3	5
1 to 2 years....	3	.....	1	.....	1	.....	2	2	3	7	1	.....
2 to 4 "	5	.....	1	.....	2	3	.....	3	2	1	1	1
5 to 9 " ....	.....	1	1	1	.....	2	1	.....	2	1	.....	3
10 to 14 "	2	1	.....	1	.....	2	2	.....	1	1	1	.....
15 to 19 "	3	2	.....	2	2	4	2	2	2	1	5	1
20 to 24 "	4	4	.....	1	5	.....	1	5	1	5	.....	4
25 to 29 "	2	4	2	3	4	1	5	3	5	5	1	3
30 to 34 "	1	3	6	.....	4	3	2	4	8	5	2	4
35 to 39 "	5	2	3	2	5	4	5	4	1	2	3	3
40 to 44 "	6	2	4	1	1	2	3	4	4	2	2	2
45 to 49 "	6	5	2	3	6	.....	2	2	3	3	4	5
50 to 54 "	3	3	4	4	4	5	5	2	2	2	5	3
55 to 59 "	2	1	6	4	9	2	3	1	3	4	6	.....
60 to 64 "	5	3	3	2	4	7	5	3	.....	4	3	3
65 to 69 "	6	1	2	4	.....	.....	5	3	4	3	2	1
70 to 74 "	4	1	2	.....	4	1	4	1	6	2	2	2
75 to 79 "	4	1	1	3	2	1	2	.....	3	.....	2	2
80 to 84 " ....	.....	1	.....	.....	1	4	2	1	.....	.....	.....	.....
85 to 89 " ....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....
90 to 94 " ....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
95 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each sex..	65	42	48	32	62	53	57	44	57	54	43	42
Totals, both sexes,	107		80		115		101		111		85	

TABLE VI. B, *Concluded*.—DEATHS: BY MONTHS AND AGE PERIODS. NONRESIDENTS.

AGE PERIOD.	July.		August.		September.		October.		November.		December.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	13	12	30	22	18	8	10	8	5	3	6	7
1 to 2 years....	2	2	2	3	3	4	2	.....	3	2	.....	6
2 to 4 " ....	.....	4	.....	2	2	1	.....	1	1	2	5	2
5 to 9 "	2	3	2	.....	2	1	1	2	.....	1	4	.....
10 to 14 " ....	.....	.....	1	.....	.....	.....	1	.....	1	.....	1	1
15 to 19 "	2	.....	.....	1	1	.....	2	1	1	2	.....	1
20 to 24 "	2	4	2	2	5	2	4	1	3	1	3	5
25 to 29 " ....	.....	1	2	1	4	1	5	1	.....	2	4	1
30 to 34 "	5	3	4	2	5	2	3	4	4	1	1	1
35 to 39 "	8	2	2	1	4	3	4	1	8	1	5	1
40 to 44 "	4	1	3	1	1	1	6	5	4	2	6	4
45 to 49 "	3	.....	3	6	4	3	3	1	7	2	5	3
50 to 54 "	3	5	2	4	6	.....	7	1	5	2	4	3
55 to 59 "	6	2	2	5	5	2	5	6	5	4	4	1
60 to 64 "	3	3	4	3	1	1	4	3	2	2	5	4
65 to 69 "	2	4	1	2	4	.....	4	2	3	1	5	.....
70 to 74 "	3	2	2	2	1	2	3	3	.....	2	4	2
75 to 79 "	1	1	3	.....	2	.....	3	1	2	.....	4	1
80 to 84 " ....	.....	2	.....	1	2	.....	.....	.....	2	1	1	.....
85 to 89 " ....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	1	1
90 to 94 " ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Totals, each sex..	59	51	65	59	71	31	67	42	56	31	68	44
Totals, both sexes,	110		124		102		109		87		112	

TABLE VI. C.—DEATHS: BY MONTHS AND AGE PERIODS.
RESIDENCE UNKNOWN.

AGE PERIOD.	January.		February.		March.		April.		May.		June.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	13	7	11	4	13	4	11	9	11	14	12	8
1 to 2 years....	1	.....	.....	.....	5	3	.....	.....	5	1	1	4
2 to 4 “ .....	.....	.....	.....	.....	.....	.....	3	1	2	2	2	.....
5 to 9 “ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 to 14 “ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 to 19 “ .....	.....	.....	1	1	.....	.....	.....	.....	1	.....	1	.....
20 to 24 “ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
25 to 29 “	2	2	2	.....	1	1	1	1	.....	1	.....	.....
30 to 34 “	1	.....	1	.....	1	1	.....	.....	3	1	1	1
35 to 39 “ ....	.....	1	.....	.....	1	.....	2	1	.....	.....	1	.....
40 to 44 “ ....	.....	.....	.....	1	1	.....	2	1	1	1	.....	.....
45 to 49 “	3	.....	1	.....	1	1	3	.....	1	.....	1	.....
50 to 54 “ ....	.....	.....	.....	1	2	1	1	.....	1	.....	.....	.....
55 to 59 “ ....	.....	.....	1	1	.....	.....	1	.....	1	.....	.....	.....
60 to 64 “	1	.....	1	1	.....	.....	.....	.....	2	.....	.....	.....
65 to 69 “ ....	.....	.....	1	.....	1	.....	.....	1	1	.....	2	.....
70 to 74 “ ....	.....	.....	1	.....	.....	.....	.....	.....	1	1	.....	.....
75 to 79 “ ....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
80 to 84 “ ....	.....	1	2	.....	.....	1	.....	.....	1	.....	.....	.....
85 to 89 “ ....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....
90 to 94 “ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Totals, each sex..	21	12	22	11	26	13	24	14	31	22	22	14
Totals, both sexes,	33		33		39		38		53		36	

TABLE VI. C, *Concluded*.—DEATHS: BY MONTHS AND AGE PERIODS.
RESIDENCE UNKNOWN.

AGE PERIOD.	July.		August.		September.		October.		November.		December.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	11	14	22	15	14	3	8	10	5	10	1	2
1 to 2 years.....				1	3	1		1	1	1	1	2
2 to 4 “.....		1	1									1
5 to 9 “.....		1										
10 to 14 “.....												1
15 to 19 “.....												
20 to 24 “.....	2											
25 to 29 “.....	2	2		1	2						2	
30 to 34 “.....	3		1		2	1					1	
35 to 39 “.....	3		1	2	1		1	1			1	1
40 to 44 “.....	3		1				2		2		3	2
45 to 49 “.....	1	1			2		1		1	1	1	
50 to 54 “.....	1		1		1		1		1			1
55 to 59 “.....	1	1	1				2					
60 to 64 “.....			1					1				
65 to 69 “.....	2						1			1		
70 to 74 “.....			1							1		
75 to 79 “.....												
80 to 84 “.....												1
85 to 89 “.....				1								
90 to 94 “.....												
95 and over.....												
Totals, each sex..	29	20	30	20	25	5	16	13	10	14	10	11
Totals, both sexes,	49		50		30		29		24		21	

TABLE VII.—DEATHS: AGE PERIOD AND CAUSE.
TOTAL MORTALITY.

AGE PERIOD.	TOTAL DEATHS.	Total, Each Sex.		Phthisis and Tuber- culosis, Pulmonary.		Pneumonia.		Bronchitis.		Diseases of Heart and Adnexa.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year	2,735	1,544	1,191	10	9	213	194	54	45	37	31
1 to 2 years	621	319	302	9	21	129	121	9	8	5	2
2 to 4 "	538	284	254	13	7	75	73	5	7	2	5
5 to 9 "	271	156	115	13	8	15	24	.....	2	15	7
10 to 14 "	143	74	69	5	7	2	8	.....	.....	11	16
15 to 19 "	243	133	110	33	40	7	6	.....	1	18	16
20 to 24 "	379	205	174	73	60	16	8	.....	1	11	16
25 to 29 "	461	235	226	62	73	25	14	1	.....	25	20
30 to 34 "	495	273	222	88	73	31	20	.....	1	23	19
35 to 39 "	556	318	238	94	49	32	25	2	2	24	27
40 to 44 "	599	324	275	61	52	42	14	.....	1	52	33
45 to 49 "	610	347	263	54	31	39	23	2	7	40	42
50 to 54 "	600	323	277	42	21	36	23	3	2	58	42
55 to 59 "	646	348	298	30	21	30	33	4	7	76	40
60 to 64 "	678	322	356	22	10	30	46	7	12	70	67
65 to 69 "	641	335	306	7	10	35	42	5	9	76	57
70 to 74 "	564	271	293	7	5	23	34	4	14	55	55
75 to 79 "	447	197	250	3	4	23	35	9	11	36	41
80 to 84 "	297	117	180	.....	2	13	30	3	9	25	29
85 to 89 "	170	51	119	.....	1	6	8	2	7	5	22
90 to 94 "	51	19	32	.....	.....	.....	3	2	2	.....	7
95 and over	11	3	8	.....	.....	.....	1	1	1	2	2
Totals, each sex. . . . .	.....	6,198	5,558	626	504	822	795	113	149	666	596
Totals, both sexes.	11,756	11,756		1,130		1,617		262		1,262	

TABLE VII., *Continued.*—DEATHS: AGE PERIOD AND CAUSE.
TOTAL MORTALITY.

AGE PERIOD.	Typhoid and Typhus Fever.		Apoplexy and Cerebral Hemorrhage.		Congenital Debility, Marasmus.*		Diseases of the Kidneys.		Cancer, Uterine.		Cancer of Vital Organs.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....			7	5	370	258	5	9				
1 to 2 years.....	2	1			29	22	2	1				
2 to 4 " ...	2	6		2	9	3	3	2				
5 to 9 " ...	1	3			2	1	4	5				
10 to 14 " ...	4	3					1	4				
15 to 19 " ...	15	4					2	3				
20 to 24 " ...	20	12	1		1		5	9		1		
25 to 29 " ...	8	10	3	2		1	10	13		1	1	2
30 to 34 " ...	8	10	3	2			19	18		4		
35 to 39 " ...	9	3	5	3		1	16	15		9	7	5
40 to 44 " ...	6	5	14	7			14	26		9	10	16
45 to 49 " ...	8	1	16	19			17	25		15	19	18
50 to 54 " ...	3		19	29			26	35		13	20	23
55 to 59 " ...	2	1	29	35	2	1	38	28		10	25	33
60 to 64 " ...			42	43	2	1	25	26		12	24	27
65 to 69 " ...		1	52	34	1		32	30		5	26	26
70 to 74 " ...		1	36	42			19	32		1	26	17
75 to 79 " ...			28	46			12	13		3	13	12
80 to 84 " ...			18	16		1	4	10		1	3	4
85 to 89 " ...			8	18		1	1	2			1	3
90 to 94 " ...			1	3		1	1					
95 and over.....												
Totals, each sex ..	88	61	282	306	416	291	256	306		84	175	186
Both sexes.....	149		588		707		562		84		361	

* Marasmus applies to all over two years.

TABLE VII., *Continued.*—DEATHS: AGE PERIOD AND CAUSE.
TOTAL MORTALITY.

AGE PERIOD.	Cancer of Non-vital Organs and Tissues.		Diphtheria.		Cholera Infantum.		Scarlet Fever.		Meningitis.		Premature Birth.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year			12	5	70	42	3	.....	63	44	208	153
1 to 2 years			12	17	12	4	6	9	41	32	.....	.....
2 to 4 "			40	39	.....	.....	21	24	43	30	.....	.....
5 to 9 "			32	19	.....	.....	10	9	17	8	.....	.....
10 to 14 "			4	3	.....	.....	4	3	6	7	.....	.....
15 to 19 "			3	.....	.....	.....	1	1	9	3	.....	.....
20 to 24 " . . . . .			.....	3	.....	.....	1	1	12	3	.....	.....
25 to 29 " . . . . .			.....	4	.....	.....	1	1	3	6	.....	.....
30 to 34 "			3	1	.....	.....	.....	.....	4	5	.....	.....
35 to 39 "		6	1	1	.....	.....	1	.....	7	1	.....	.....
40 to 44 "	2	8	1	.....	.....	.....	.....	.....	4	4	.....	.....
45 to 49 "	2	5	.....	1	.....	.....	.....	.....	1	2	.....	.....
50 to 54 "	4	10	1	.....	.....	.....	.....	.....	4	3	.....	.....
55 to 59 "	5	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 to 64 "	5	10	.....	1	.....	.....	.....	.....	1	.....	.....	.....
65 to 69 "	7	9	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
70 to 74 "	4	8	.....	1	.....	.....	.....	.....	2	.....	.....	.....
75 to 79 "	1	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80 to 84 " . . . . .	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
85 to 89 "	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
90 to 94 "	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each sex . . .	32	79	109	95	82	46	48	48	217	149	208	153
Totals, both sexes,	111		204		128		96		366		361	

TABLE VII., *Concluded*.—DEATHS: AGE PERIOD AND CAUSE.
TOTAL MORTALITY.

AGE PERIOD.	Enteritis.		Senile Debility.		All Other Diseases.		Accidental.		Suicide.		Homicide.		Unknown.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year....	106	104	.....	.....	360	271	7	6	.....	.....	.....	1	19	14
1 to 2 years....	16	22	.....	.....	39	31	6	8	.....	.....	.....	.....	2	3
2 to 4 " ...	7	8	.....	.....	40	33	22	14	.....	.....	.....	.....	2	1
5 to 9 " ...	1	2	.....	.....	24	20	21	6	.....	.....	.....	1	1	.....
10 to 14 " ...	1	.....	.....	.....	19	13	16	4	1	.....	.....	1	.....	.....
15 to 19 " ...	.....	.....	.....	.....	21	33	21	3	2	.....	.....	.....	1	.....
20 to 24 " ...	.....	.....	.....	.....	28	47	25	7	10	3	1	.....	1	3
25 to 29 " ...	.....	1	.....	.....	35	65	42	8	15	3	3	2	1	.....
30 to 34 " ...	3	.....	.....	.....	31	53	41	7	14	7	3	1	2	1
35 to 39 " ...	.....	2	.....	.....	67	69	36	13	13	4	2	2	2	1
40 to 44 " ...	1	1	.....	.....	58	75	39	11	11	.....	1	1	8	2
45 to 49 " ...	.....	2	.....	.....	83	54	50	12	9	4	4	.....	3	2
50 to 54 " ...	2	1	.....	.....	62	54	26	12	10	4	2	.....	5	5
55 to 59 " ...	1	1	.....	2	65	60	30	15	7	.....	.....	.....	4	.....
60 to 64 " ...	3	3	1	2	58	79	23	14	6	2	.....	.....	3	1
65 to 69 " ...	4	9	4	7	64	55	17	9	.....	.....	.....	.....	5	2
70 to 74 " ...	4	8	6	11	66	55	12	7	2	.....	.....	1	5	1
75 to 79 " ...	.....	5	9	18	52	47	9	9	1	.....	.....	.....	1	1
80 to 84 " ...	1	9	26	26	18	31	4	8	1	.....	.....	.....	1	.....
85 to 89 " ...	.....	2	17	17	9	32	.....	3	1	.....	.....	.....	.....	.....
90 to 94 " ...	.....	1	6	8	7	5	1	1	.....	.....	.....	.....	.....	1
95 and over....	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each sex..	150	181	69	93	1,206	1,184	448	177	103	27	16	10	66	38
Both sexes.....	331		162		2,390		625		130		26		104	

TABLE VII. A.—DEATHS: AGE PERIOD AND CAUSE.
RESIDENTS OF BOSTON.

AGE PERIOD.	TOTAL DEATHS.	Total, Each Sex.		Phthisis and Tuber- culosis.		Pneumonia.		Bronchitis.		Diseases of Heart and Adnexa.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year	2,292	1,294	998	8	6	198	177	52	44	35	28
1 to 2 years	541	279	262	6	15	116	112	9	8	5	2
2 to 4 "	485	257	228	9	5	67	65	5	7	2	5
5 to 9 "	240	141	99	11	7	13	21	.....	2	13	7
10 to 14 "	126	64	62	5	5	2	8	.....	.....	8	15
15 to 19 "	202	110	92	30	34	7	6	.....	1	16	15
20 to 24 "	311	172	139	65	49	14	8	.....	1	10	13
25 to 29 "	381	189	192	57	67	21	12	.....	.....	21	19
30 to 34 "	400	214	186	76	66	26	17	.....	1	18	17
35 to 39 "	460	254	206	86	44	24	21	2	2	20	24
40 to 44 "	508	265	243	53	49	35	19	.....	1	47	30
45 to 49 "	510	283	227	51	30	36	19	2	7	34	39
50 to 54 "	504	264	240	38	21	30	18	3	2	52	40
55 to 59 "	549	285	264	28	21	25	30	4	7	61	37
60 to 64 "	594	278	316	22	10	24	40	7	12	63	63
65 to 69 "	572	289	283	6	8	33	41	5	9	63	51
70 to 74 "	504	233	271	7	4	17	34	4	14	48	51
75 to 79 "	406	168	238	2	3	19	32	9	10	32	39
80 to 84 "	273	106	167	.....	2	12	25	3	8	22	28
85 to 89 "	160	47	113	.....	1	6	8	2	7	5	22
90 to 94 "	50	19	31	.....	.....	.....	3	2	2	.....	6
95 and over	9	3	6	.....	.....	.....	1	1	.....	2	2
Totals, each sex . . . . .	.....	5,214	4,863	560	447	725	717	110	145	577	.....
Totals, both sexes . . .	10,077	10,077		1,007		1,432		255		1,130	

TABLE VII. A, *Continued.*—DEATHS: AGE PERIOD AND CAUSE.
RESIDENTS OF BOSTON.

AGE PERIOD.	Typhoid and Typhus Fever.		Apoplexy and Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.*		Diseases of the Kidneys.		Cancer, Uterine.		Cancer of Vital Organs.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.			5	4	258	174	3	5				
1 to 2 years.	2	1			18	14	1	1				
2 to 4 "	2	6		2	9	3	2	2				
5 to 9 "	1	3			2	1	4	5				
10 to 14 "	3	3					1	3				
15 to 19 "	15	3					2	3				
20 to 24 "	19	11			1		5	8		1		
25 to 29 "	8	9	3	1		1	9	10		1	1	2
30 to 34 "	6	9	3	1			16	13		2		
35 to 39 "	6	2	4	3		1	13	13		8	6	3
40 to 44 "	6	5	12	7			12	25		9	8	14
45 to 49 "	8	1	14	16			15	19		14	14	14
50 to 54 "	3		15	26			23	35		8	13	19
55 to 59 "	2	1	28	32	2	1	33	23		9	19	28
60 to 64 "			39	41	2	1	23	24		9	21	19
65 to 69 "		1	47	33	1		25	28		4	22	23
70 to 74 "		1	34	39			16	30		1	23	14
75 to 79 "			24	45			11	12		3	11	12
80 to 84 "			16	14		1	4	9		1	2	4
85 to 89 "			8	18		1	1	2				3
90 to 94 "			1	3		1	1					
95 and over.												
Totals, each sex. . .	81	56	253	285	293	199	220	270		70	140	155
Both sexes.	137		538		492		490		70		295	

* Marasmus applies to all over two years.

TABLE VII. A, *Continued*.—DEATHS: AGE PERIOD AND CAUSE.
RESIDENTS OF BOSTON.

AGE PERIOD.	Cancer of Tissues and Non-vital Organs.		Diphtheria.		Cholera Infantum.		Scarlet Fever.		Meningitis.		Premature Birth.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....			10	3	67	42	2	.....	59	39	185	134
1 to 2 years.....			12	16	12	4	6	9	37	27	.....	.....
2 to 4 ".....			39	33	.....	.....	19	23	37	27	.....	.....
5 to 9 ".....			32	18	.....	.....	9	8	15	7	.....	.....
10 to 14 ".....			4	3	.....	.....	4	3	6	7	.....	.....
15 to 19 ".....			2	.....	.....	.....	1	.....	7	3	.....	.....
20 to 24 ".....			.....	3	.....	.....	.....	1	9	3	.....	.....
25 to 29 ".....			.....	3	.....	.....	1	1	2	4	.....	.....
30 to 34 ".....			3	1	.....	.....	.....	.....	3	5	.....	.....
35 to 39 ".....		6	1	.....	.....	.....	1	.....	5	1	.....	.....
40 to 44 ".....	2	8	1	.....	.....	.....	.....	.....	4	4	.....	.....
45 to 49 ".....	2	5	.....	1	.....	.....	.....	.....	1	2	.....	.....
50 to 54 ".....	2	9	.....	.....	.....	.....	.....	.....	4	3	.....	.....
55 to 59 ".....	5	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 to 64 ".....	5	8	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
65 to 69 ".....	6	8	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
70 to 74 ".....	4	8	.....	1	.....	.....	.....	.....	1	.....	.....	.....
75 to 79 ".....	1	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80 to 84 ".....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
85 to 89 ".....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
90 to 94 ".....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each sex...	28	75	104	83	79	46	43	45	190	133	185	134
Totals, both sexes,	103		187		125		88		323		319	

TABLE VII. A, *Concluded*.—DEATHS: AGE PERIOD AND CAUSE.
RESIDENTS OF BOSTON.

AGE PERIOD.	Enteritis.		Senile Debility.		All Other Diseases.		Accidental.		Suicide.		Homicide.		Unknown.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year	101	101	....	....	291	222	7	5	....	....	....	....	13	14
1 to 2 years	14	20	....	....	35	24	4	7	....	....	....	....	2	2
2 to 4 "	7	8	....	....	36	28	21	13	....	....	....	....	2	1
5 to 9 "	1	2	....	....	20	12	19	5	....	....	....	1	1	....
10 to 14 "	1	....	....	....	15	10	14	4	1	....	....	1	....	....
15 to 19 " . . . . .	....	....	....	....	15	25	13	2	1	....	....	....	1	....
20 to 24 " . . . . .	....	....	....	....	23	33	16	4	8	1	1	....	1	3
25 to 29 " . . . . .	....	1	....	....	29	53	23	5	11	3	3	....	....	....
30 to 34 "	3	....	....	....	23	39	22	6	11	7	3	1	1	1
35 to 39 " . . . . .	....	2	....	....	53	58	22	11	9	4	....	2	2	1
40 to 44 "	1	1	....	....	42	61	26	7	8	....	1	1	7	2
45 to 49 " . . . . .	....	2	....	....	64	47	32	5	4	4	4	....	2	2
50 to 54 "	2	....	....	....	47	45	17	7	8	3	2	....	5	4
55 to 59 "	1	1	....	2	50	51	18	10	6	....	....	....	3	....
60 to 64 "	3	3	1	2	47	69	16	11	2	2	....	....	3	1
65 to 69 "	4	9	4	7	57	50	12	8	....	....	....	....	4	2
70 to 74 "	4	8	5	11	57	49	9	4	1	....	....	1	3	1
75 to 79 " . . . . .	....	5	9	17	45	45	4	9	1	....	....	....	....	1
80 to 84 "	1	9	25	24	17	31	2	7	1	....	....	....	1	....
85 to 89 " . . . . .	....	2	17	17	7	27	....	2	1	....	....	....	....	....
90 to 94 " . . . . .	....	1	6	8	7	5	1	1	....	....	....	....	....	1
95 and over . . . . .	....	....	....	2	....	1	....	....	....	....	....	....	....	....
Totals, each sex. . . .	143	175	67	90	980	985	298	133	73	24	14	7	51	36
Totals, both sexes...	318		157		1,966		431		97		21		87	

TABLE VII. B.—DEATHS: AGE PERIOD AND CAUSE. NON-RESIDENTS.

AGE PERIOD.	TOTAL DEATHS.	Total, Each Sex.		Phthisis and Tubercu- losis.		Pneumonia.		Bronchitis.		Diseases of Heart and Adnexa.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	211	118	93	1	2	7	8	2	1	1	1
1 to 2 years.....	49	23	26	2	2	8	5	.....	.....	.....	.....
2 to 4 ".....	39	19	20	4	2	4	6	.....	.....	.....	.....
5 to 9 ".....	30	15	15	2	1	2	2	.....	.....	2	.....
10 to 14 ".....	16	10	6	.....	2	.....	.....	.....	.....	3	1
15 to 19 ".....	37	20	17	2	6	.....	.....	.....	.....	2	1
20 to 24 ".....	64	30	34	8	10	1	.....	.....	.....	1	3
25 to 29 ".....	60	34	26	4	5	4	1	1	.....	3	1
30 to 34 ".....	77	45	32	10	6	3	2	.....	.....	5	1
35 to 39 ".....	79	53	26	8	4	8	2	.....	.....	4	2
40 to 44 ".....	71	44	27	6	2	3	3	.....	.....	2	1
45 to 49 ".....	81	48	33	2	.....	1	2	.....	.....	4	3
50 to 54 ".....	84	50	34	4	.....	5	4	.....	.....	4	2
55 to 59 ".....	88	56	32	2	.....	3	2	.....	.....	15	2
60 to 64 ".....	77	39	38	.....	.....	5	5	.....	.....	6	3
65 to 69 ".....	59	38	21	1	2	1	1	.....	.....	10	4
70 to 74 ".....	55	35	20	.....	1	6	.....	.....	.....	6	3
75 to 79 ".....	39	29	10	1	1	4	3	.....	.....	4	2
80 to 84 ".....	18	8	10	.....	.....	1	4	.....	1	2	.....
85 to 89 ".....	7	4	3	.....	.....	.....	.....	.....	.....	.....	.....
90 to 94 ".....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
95 and over.....	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....
Totals, each sex.....	.....	718	525	57	46	66	50	3	3	74	31
Totals, both sexes...	1,243	1,243	.....	103	.....	123	.....	6	.....	105	.....

TABLE VII. B, *Continued*.—DEATHS: AGE PERIOD AND CAUSE.
NONRESIDENTS.

AGE PERIOD.	Typhoid and Typhus Fever.		Apoplexy and Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Diseases of the Kidneys.		Cancer, Uterine.		Cancer of Vital Organs.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....			2	1	22	15	1	2				
1 to 2 years.....					4	4						
2 to 4 “.....							1					
5 to 9 “.....												
10 to 14 “.....	1											
15 to 19 “.....		1										
20 to 24 “.....		1	1					1				
25 to 29 “.....							1	3				
30 to 34 “.....	1	1		1			2	5		2		
35 to 39 “.....	3	1	1				2	2		1	1	2
40 to 44 “.....							2	1			2	2
45 to 49 “.....			1	3			2	6		1	5	4
50 to 54 “.....			3	2			3			5	7	4
55 to 59 “.....			1	3			5	5		1	6	5
60 to 64 “.....			1	2			2	2		3	3	8
65 to 69 “.....			4	1			7	2		1	4	3
70 to 74 “.....			2	3			3	2			3	3
75 to 79 “.....			4	1			1	1			2	
80 to 84 “.....			1	1				1			1	
85 to 89 “.....											1	
90 to 94 “.....												
95 and over.....												
Totals, each sex...	5	4	21	18	26	19	32	33		14	35	31
Totals, both sexes,	9		39		45		65		14		66	

TABLE VII. B, *Continued*.—DEATHS: AGE PERIOD AND CAUSE.
NONRESIDENTS.

AGE PERIOD.	Cancer of Non-vital Organs and Tissues.		Diphtheria.		Cholera Infantum.		Scarlet Fever.		Meningitis.		Premature Birth.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....			2	1	1				2	5	14	15
1 to 2 years.....				1					3	5		
2 to 4 “.....			1	4			1		4	3		
5 to 9 “.....				1			1	1	2	1		
10 to 14 “.....												
15 to 19 “.....								1	2			
20 to 24 “.....							1		2			
25 to 29 “.....									1	2		
30 to 34 “.....									1			
35 to 39 “.....									1			
40 to 44 “.....												
45 to 49 “.....												
50 to 54 “.....	2	1	1									
55 to 59 “.....												
60 to 64 “.....		2							1			
65 to 69 “.....	1	1										
70 to 74 “.....									1			
75 to 79 “.....												
80 to 84 “.....												
85 to 89 “.....	1											
90 to 94 “.....												
95 and over.....												
Totals, each sex..	4	4	4	7	1		3	2	20	16	14	15
Totals, both sexes,	8		11		1		5		36		29	

TABLE VII. B, *Concluded*.—DEATHS: AGE PERIOD AND CAUSE.
NONRESIDENTS.

AGE PERIOD.	Enteritis.		Senile Debility.		All Other Diseases.		Accidental.		Suicide.		Homicide.		Unknown.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	4	1	.....	.....	56	40	.....	1	.....	.....	.....	.....	3	.....
1 to 2 years.....	2	1	.....	.....	2	6	2	1	.....	.....	.....	.....	.....	1
2 to 4 “.....					3	4	1	1	.....	.....	.....	.....	.....	.....
5 to 9 “.....					4	8	2	1	.....	.....	.....	.....	.....	.....
10 to 14 “.....					4	3	2	.....	.....	.....	.....	.....	.....	.....
15 to 19 “.....					6	7	7	1	1	.....	.....	.....	.....	.....
20 to 24 “.....					5	14	9	3	2	2	.....	.....	.....	.....
25 to 29 “.....					6	11	12	3	2	.....	.....	.....	.....	.....
30 to 34 “.....					6	13	15	1	2	.....	.....	.....	.....	.....
35 to 39 “.....					12	10	10	2	2	.....	1	.....	.....	.....
40 to 44 “.....					14	14	11	4	3	.....	.....	.....	1	.....
45 to 49 “.....					16	7	13	7	4	.....	.....	.....	.....	.....
50 to 54 “.....		1	.....	.....	12	9	8	5	1	1	.....	.....	.....	.....
55 to 59 “.....					14	9	9	5	1	.....	.....	.....	.....	.....
60 to 64 “.....					11	10	6	3	4	.....	.....	.....	.....	.....
65 to 69 “.....					6	5	4	1	.....	.....	.....	.....	.....	.....
70 to 74 “.....			1	.....	7	5	3	3	1	.....	.....	.....	2	.....
75 to 79 “.....					7	2	5	.....	.....	.....	.....	.....	1	.....
80 to 84 “.....			1	2	1	.....	1	1	.....	.....	.....	.....	.....	.....
85 to 89 “.....					2	2	.....	1	.....	.....	.....	.....	.....	.....
90 to 94 “.....														
95 and over.....														
Totals, each sex.....	6	3	2	2	194	179	120	44	23	3	1	.....	7	1
Totals, both sexes....	9	.....	4	.....	373	.....	164	.....	26	.....	1	.....	8	.....

TABLE VII. C.—DEATHS: AGE PERIOD AND CAUSE.
RESIDENCE UNKNOWN.

AGE PERIOD.	TOTAL DEATHS.	Total, Each Sex.		Phthisis and Tubercu- losis.		Pneumonia.		Bronchitis.		Diseases of Heart and Adnexa.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year	232	132	100	1	1	8	9	.....	.....	1	2
1 to 2 years	31	17	14	1	4	5	4	.....	.....	.....	.....
2 to 4 "	14	8	6	.....	.....	4	2	.....	.....	.....	.....
5 to 9 "	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....
10 to 14 "	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
15 to 19 "	4	3	1	1	.....	.....	.....	.....	.....	.....	.....
20 to 24 "	4	3	1	.....	1	1	.....	.....	.....	.....	.....
25 to 29 "	20	12	8	1	1	.....	1	.....	.....	1	.....
30 to 34 "	18	14	4	2	1	2	1	.....	.....	.....	1
35 to 39 "	17	11	6	.....	1	.....	2	.....	.....	.....	1
40 to 44 "	20	15	5	2	1	4	2	.....	.....	3	2
45 to 49 "	19	16	3	1	1	2	2	.....	.....	2	.....
50 to 54 "	12	9	3	.....	.....	1	1	.....	.....	2	.....
55 to 59 "	9	7	2	.....	.....	2	1	.....	.....	.....	1
60 to 64 "	7	5	2	.....	.....	1	1	.....	.....	1	1
65 to 69 "	10	8	2	.....	.....	1	.....	.....	.....	3	2
70 to 74 "	5	3	2	.....	.....	.....	.....	.....	.....	1	1
75 to 79 "	2	.....	2	.....	.....	.....	.....	.....	1	.....	.....
80 to 84 "	6	3	3	.....	.....	.....	1	.....	.....	1	1
85 to 89 "	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
90 to 94 " . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each sex . . . . .	.....	266	170	9	11	31	28	.....	1	15	12
Totals, both sexes . . .	436	436	.....	20	.....	59	.....	1	.....	27	.....

TABLE VII. C, *Continued.*—DEATHS: AGE PERIOD AND CAUSE.
RESIDENCE UNKNOWN.

AGE PERIOD.	Typhoid and Typhus Fever.		Apoplexy and Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Diseases of the Kidneys.		Diphtheria.		Cholera Infantum.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....					90	69	1	2		1	2	
1 to 2 years.....					7	4	1					
2 to 4 “.....										2		
5 to 9 “.....												
10 to 14 “.....								1				
15 to 19 “.....									1			
20 to 24 “.....	1											
25 to 29 “.....		1		1						1		
30 to 34 “.....	1						1					
35 to 39 “.....							1			1		
40 to 44 “.....			2									
45 to 49 “.....			1									
50 to 54 “.....			1	1								
55 to 59 “.....												
60 to 64 “.....			2									
65 to 69 “.....			1									
70 to 74 “.....												
75 to 79 “.....												
80 to 84 “.....			1	1								
85 to 89 “.....												
90 to 94 “.....												
95 and over.....												
Totals, each sex...	2	1	8	3	97	73	4	3	1	5	2	
Totals, both sexes.	3		11		170		7		6		2	

TABLE VII. C, *Continued.*—DEATHS: AGE PERIOD AND CAUSE.
RESIDENCE UNKNOWN.

AGE PERIOD.	Scarlet Fever.		Meningitis.		Premature Birth.		Enteritis.		Senile Debility.		All Other Diseases.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....	1	.....	2	.....	9	4	1	2	.....	.....	13	9
1 to 2 years.....			1	.....	.....	.....	.....	1	.....	.....	2	1
2 to 4 “.....	1	1	2	.....	.....	.....	.....	.....	.....	.....	1	1
5 to 9 “.....												
10 to 14 “.....												
15 to 19 “.....												1
20 to 24 “.....			1	.....	.....	.....	.....	.....	.....	.....	.....	.....
25 to 29 “.....												1
30 to 34 “.....											2	1
35 to 39 “.....			1	.....	.....	.....	.....	.....	.....	.....	2	1
40 to 44 “.....											2	.....
45 to 49 “.....											3	.....
50 to 54 “.....											3	.....
55 to 59 “.....											1	.....
60 to 64 “.....												
65 to 69 “.....											1	.....
70 to 74 “.....											2	1
75 to 79 “.....										1	.....	.....
80 to 84 “.....												
85 to 89 “.....												3
90 to 94 “.....												
95 and over.....												1
Totals, each sex...	2	1	7	.....	9	4	1	3	.....	1	32	20
Totals, both sexes,	3		7		13		4		1		52	

TABLE VII. C, *Concluded*.—DEATHS: AGE PERIOD AND CAUSE.
RESIDENCE UNKNOWN.

AGE PERIOD.	Accidental.		Suicide.		Homicide.		Unknown.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year.....						1	3	
1 to 2 years.....								
2 to 4 “.....								
5 to 9 “.....								
10 to 14 “.....								
15 to 19 “.....	1							
20 to 24 “.....								
25 to 29 “.....	7		2			2	1	
30 to 34 “.....	4		1				1	
35 to 39 “.....	4		2		1			
40 to 44 “.....	2							
45 to 49 “.....	5		1				1	
50 to 54 “.....	1		1					1
55 to 59 “.....	3						1	
60 to 64 “.....	1							
65 to 69 “.....	1						1	
70 to 74 “.....								
75 to 79 “.....								
80 to 84 “.....	1							
85 to 89 “.....								
90 to 94 “.....								
95 and over.....								
Totals, each sex.....	30		7		1	3	8	1
Totals, both sexes.....	30		7		4		9	

TABLE VIII.—DEATHS: PRINCIPAL CAUSES. RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN.

WARDS.	TOTAL DEATHS.	Total, Each Sex.		Phthisis and Tuber- culosis, Pulmonary.		Pneumonia.		Bronchitis.		Diseases of Heart and Adnexa.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	424	220	204	20	19	28	36	4	8	22	19
2.....	430	235	195	20	10	28	35	6	7	24	26
3.....	280	140	140	10	13	22	19	4	7	17	18
4.....	225	118	107	17	11	14	16	3	2	13	13
5.....	254	138	116	18	18	22	16	5	1	13	13
6.....	655	359	296	23	20	94	80	20	16	30	15
7.....	354	196	158	25	12	31	33	4	3	30	17
8.....	409	232	177	26	14	46	33	3	7	19	19
9.....	455	263	192	28	18	36	26	1	2	19	20
10.....	307	139	168	16	11	13	19	1	3	16	18
11.....	280	119	161	6	11	11	27	2	4	17	21
12.....	354	182	172	20	18	17	19	3	7	15	19
13.....	486	267	219	28	22	42	33	8	9	28	18
14.....	389	206	183	32	10	27	26	8	3	21	18
15.....	357	170	187	25	25	23	21	4	5	19	15
16.....	334	170	164	23	6	29	17	3	4	17	23
17.....	499	248	251	34	39	37	37	3	9	27	22
18.....	444	242	202	36	24	24	37	6	9	30	22
19.....	477	221	256	22	31	40	28	5	6	28	23
20.....	579	284	295	18	25	24	36	1	9	39	39
21.....	431	230	201	18	11	25	29	3	3	38	32
22.....	460	237	223	27	20	28	26	3	6	28	35
23.....	390	195	195	23	26	16	28	5	1	22	23
24.....	446	223	223	19	15	23	17	4	5	27	36
25.....	302	152	150	24	14	18	19	1	9	16	24
Ward unknown....	56	28	28	2	4	7	4	.....	.....	2	5
Residents, each sex.....	.....	5,214	4,863	560	447	725	717	110	145	577	553
Both sexes.....	10,077	10,077		1,007		1,442		255		1,130	
Nonresidents.....	1,243	718	525	57	46	66	50	3	3	74	31
Unknown.....	436	266	170	9	11	31	28	.....	1	15	12
Totals, each sex...	.....	6,198	5,558	626	504	822	795	113	149	666	596
Totals, both sexes..	11,756	11,756		1,130		1,617		262		1,262	

TABLE VIII., *Continued*.—DEATHS: PRINCIPAL CAUSES. RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN.

WARDS.	Typhoid and Typhus Fever.		Apoplexy and Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.*		Kidney Diseases.		Cancer, Uterine.		Cancer of Vital Organs.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	3	5	17	12	18	7	8	10	....	4	6	6
2.....	6	5	6	4	19	9	7	11	....	3	11	8
3.....	1	.....	7	11	9	8	7	10	....	1	6	3
4.....	.....	.....	4	4	8	7	3	2	....	.....	4	2
5.....	2	2	8	6	9	1	11	5	....	4	3	4
6.....	3	3	11	6	21	11	9	8	....	2	4	2
7.....	3	.....	7	7	11	10	13	7	....	3	5	3
8.....	4	2	9	4	14	6	8	13	....	2	4	4
9.....	2	1	9	19	13	7	18	16	....	2	8	6
10.....	2	1	6	9	8	4	10	7	....	9	1	6
11.....	1	2	13	9	7	2	2	17	....	2	4	2
12.....	5	1	5	11	6	1	13	13	....	2	10	4
13.....	1	2	4	8	22	17	6	10	....	3	8	4
14.....	2	1	13	16	7	12	4	9	....	3	2	10
15.....	2	1	8	15	17	12	2	12	....	3	2	7
16.....	2	1	9	5	9	9	14	9	....	2	4	8
17.....	1	1	8	18	13	13	9	10	....	2	5	6
18.....	3	.....	10	10	13	8	6	10	....	3	4	5
19.....	3	3	5	21	9	11	8	11	....	2	5	9
20.....	1	4	25	24	20	9	20	19	....	8	9	11
21.....	2	.....	24	21	7	5	9	9	....	2	7	7
22.....	10	14	14	4	10	8	9	7	....	3	9	14
23.....	15	4	10	12	6	8	11	13	....	3	8	11
24.....	3	.....	15	16	11	10	7	19	....	2	8	8
25.....	4	3	6	8	6	4	6	13	....	.....	3	4
Ward unknown.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	1
Residents, each sex ..	81	56	253	285	293	199	220	270	....	70	140	155
Both sexes	137		538		492		490		70		295	
Nonresidents.....	5	4	21	18	26	19	32	33	....	14	35	31
Unknown	2	1	8	3	97	73	4	3	....	.....	.....	.....
Totals, each sex	88	61	282	306	416	291	256	306	....	84	175	186
Totals, both sexes ..	149		588		707		561		84		361	

* After the age of two years.

TABLE VIII., *Continued.*— DEATHS: PRINCIPAL CAUSES. RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN.

WARDS.	Cancer of Non-vital Organs and Tissues.		Diphtheria.		Cholera Infantum.		Scarlet Fever.		Meningitis.		Premature Birth.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	1	5	2	2	6	2	1	....	11	6	7	6
2.....	2	2	3	3	3	5	1	1	7	6	8	2
3.....	1	1	3	8	1	1	1	2	8	3	2	5
4.....	1	3	7	5	1	....	2	1	4	1	1	2
5.....			1	2	....	2	1	4	3	4	2	4
6.....		2	5	7	20	9	2	3	21	13	6	12
7.....	1	....	6	4	1	....	2	3	4	6	3	5
8.....		1	2	1	2	1	1	10	13	5	7	3
9.....		3	3	2	2	1	1	2	9	4	20	5
10.....	1	4	6	5	....	....	1	1	2	3	6	6
11.....	2	2	2	1	1	....	4	3	3	3	1	3
12.....	3	8	3	1	2	2	2	1	6	6	8	6
13.....		1	9	5	7	1	....	....	9	8	7	8
14.....	2	3	2	2	3	2	5	4	6	6	5	3
15.....		2	3	1	1	3	1	3	7	5	4	5
16.....	1	2	2	2	1	5	....	1	3	3	5	7
17.....	1	5	3	8	4	1	1	....	11	6	10	5
18.....			4	2	7	3	2	....	10	6	10	7
19.....	1	4	9	4	....	3	2	2	12	12	12	4
20.....	1	6	7	2	4	....	4	1	6	5	11	9
21.....	2	8	5	1	2	2	....	....	4	3	11	3
22.....	4	4	7	7	1	1	2	....	10	9	10	5
23.....	3	1	3	1	2	1	1	....	8	3	7	5
24.....		6	5	4	4	1	3	2	8	3	12	5
25.....	1	2	2	3	4	....	3	1	5	4	6	9
Ward unknown.....											4	....
Residents, each sex .	28	75	104	83	79	46	43	45	190	133	185	134
Both sexes.....	103		187		125		88		323		319	
Nonresidents.....	4	4	4	7	1	....	3	2	20	16	14	15
Unknown.....			1	5	2	....	2	1	7	....	9	4
Totals, each sex . . .	32	79	109	95	82	46	48	48	217	149	208	153
Totals, both sexes . .	111		204		128		96		366		361	

TABLE VIII., *Concluded*.—DEATHS: PRINCIPAL CAUSES. RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN.

WARDS.	Enteritis.		Senile Debility.		All Other Diseases.		Accidental.		Suicide.		Homicide.		Unknown	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	6	10	....	4	43	36	9	4	4	2	1	....	3	1
2.....	21	16	1	4	45	33	14	3	....	....	....	....	3	2
3.....	2	2	....	....	28	18	7	5	....	....	....	....	4	5
4.....	5	9	2	5	16	22	10	2	....	....	....	....	3	....
5.....	6	4	5	....	15	20	11	2	2	1	....	....	1	3
6.....	11	16	2	2	37	51	27	15	4	....	3	1	6	2
7.....	1	4	2	1	32	29	10	8	5	1	....	....	....	2
8.....	7	1	1	3	42	38	17	7	3	1	....	....	4	2
9.....	6	8	2	2	58	36	18	7	5	2	1	1	4	2
10.....	1	2	....	6	36	44	6	7	6	2	....	1	1	....
11.....	1	2	4	1	24	35	10	7	3	3	....	1	1	3
12.....	1	3	3	6	45	35	10	5	4	3	1	....	....	1
13.....	12	16	3	6	37	43	25	3	6	....	3	....	2	2
14.....	7	6	....	2	45	40	13	3	1	1	....	....	1	3
15.....	4	10	1	1	37	36	7	5	2	....	....	....	1	....
16.....	3	5	5	4	27	45	9	5	1	....	....	....	3	1
17.....	13	9	3	5	48	48	9	4	4	1	....	1	4	1
18.....	5	9	7	3	48	36	13	6	2	....	....	....	2	2
19.....	4	15	1	6	46	48	7	8	....	3	....	....	2	2
20.....	3	8	8	6	61	69	12	5	8	....	....	....	2	....
21.....	6	5	10	9	41	44	10	3	3	3	1	....	2	1
22.....	5	4	1	3	44	50	10	3	2	....	2	....	1	....
23.....	4	3	2	6	37	40	7	6	4	....	1	....	....	....
24.....	5	3	3	4	49	56	12	7	3	1	1	2	1	1
25.....	2	3	....	1	33	26	12	3	....	....	....	....	....	....
Ward unknown...	2	2	1	....	6	7	3	....	1	....	....	....	....	....
Residents, each sex.....	143	175	67	90	980	985	298	133	73	24	14	7	51	36
Both sexes.....	318		157		1,965		431		97		21		87	
Nonresidents.....	6	3	2	2	194	179	120	44	23	3	1	....	7	1
Unknown.....	1	3	....	1	32	20	20	....	7	....	1	3	8	1
Totals, each sex...	150	181	69	93	1,206	1,184	438	177	102	27	16	10	66	38
Totals, both sexes,	331		162		2,390		615		129		26		104	

TABLE IX.—DEATHS FROM EXTERNAL CAUSES. ACCIDENTAL.

MANNER OF ACCIDENT.	TOTAL MORTALITY.	Each Sex.		Residents.		Nonresi- dents.		Unknown.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Drowning.....	47	47	.....	28	.....	9	.....	10	.....
Falls.....	184	133	51	91	46	34	5	8	.....
Burns and scalds.....	64	23	41	19	35	4	6	.....	.....
Poison, chemical.....	15	11	4	9	4	2	.....	.....	.....
" illuminating gas.....	18	12	6	9	6	1	.....	.....	.....
Run over by vehicle*.....	20	17	3	15	3	2	.....	2	.....
" " ? 	2	2	.....	2	.....	.....	.....	.....	.....
Automobile accidents.....	11	6	5	3	4	2	1	1	.....
Railroad (steam).....	48	47	1	24	1	22	.....	1	.....
" (electric).....	27	21	6	14	4	7	2	.....	.....
" (not stated).....	29	25	4	13	3	11	1	1	.....
Elevator accidents.....	16	15	1	11	1	3	.....	1	.....
Firearms.....	3	3	.....	3	.....	.....	.....	.....	.....
Strangulation†.....	9	8	1	7	1	1	.....	.....	.....
Crushed by falling body.....	11	10	1	9	1	1	.....	.....	.....
Suffocation (overlaying).....	2	.....	2	.....	2	.....	.....	.....	.....
" (fire smoke).....	1	1	.....	1	.....	.....	.....	.....	.....
" other causes.....	3	2	1	2	1	.....	.....	.....	.....
Fractures, ruptures, etc.....	7	4	3	3	3	.....	.....	1	.....
Explosion.....	7	7	.....	3	.....	4	.....	.....	.....
Following surgical operation.....	68	25	43	16	14	9	29	.....	.....
Machinery accidents.....	6	6	.....	5	.....	1	.....	.....	.....
Miscellaneous.....	14	12	2	6	2	6	.....	.....	.....
Unknown, or not stated.....	13	11	2	5	2	1	.....	5	.....
Totals, each sex.....	.....	448	177	298	133	120	44	30	.....
Totals, both sexes.....	625	625	.....	431	.....	164	.....	30	.....

* Except automobiles and railroad cars.
† In most cases by lodgment of foreign body in the œsophagus.

TABLE IX. A.—DEATHS FROM EXTERNAL CAUSES. SUICIDE AND HOMICIDE.

MANNER.	TOTAL NUMBER.	Each Sex.		Residents.		Nonresi- dents.		Unknown.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
SUICIDE.									
Drowning.....	8	6	2	2	2	2	....	2	....
Hanging.....	15	14	1	13	1	1	....	....	....
By firearms.....	39	37	2	23	2	12	....	2	....
Poison, ehemieal.....	33	25	8	18	6	5	2	2	....
“ illuminating gas.....	23	13	10	12	10	1	....	....	....
Cutting or stabbing.....	8	7	1	5	1	1	....	1	....
Leap from height.....	2	1	1	....	1	1	....	....	....
Manner unknown or not stated.....	2	....	2	....	1	....	1	....	....
Totals, each sex.....	.....	103	27	73	24	23	3	7	....
Totals, both sexes.....	130	130		97		26		7	
HOMICIDE.									
By firearms.....	13	8	5	6	3	1	....	1	2
“ cutting or stabbing.....	2	2	....	2	....	....	....	....	....
“ illuminating gas.....	2	....	2	....	2	....	....	....	....
“ violent blow or push.....	6	4	2	4	2	....	....	....	....
“ strangulation.....	1	....	1	....	....	....	....	....	1
Manner unknown or not stated.....	2	2	....	2	....	....	....	....	....
Totals, each sex.....	.....	16	10	14	7	1	....	1	3
Totals, both sexes.....	26	26		21		1		4	

TABLE X.—NATIVITY OF DECEDENTS BY COUNTRIES.

WARDS.	TOTAL, BOTH SEXES.	Total, Each Sex.		Boston.		United States.*		Ireland.		British- American Province.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	424	220	204	116	100	35	30	17	27	32	22
2.....	430	235	195	144	99	12	13	26	35	12	15
3.....	280	140	140	76	72	19	17	34	41	6	5
4.....	225	118	107	57	49	25	18	30	29	3	6
5.....	254	138	116	65	59	24	14	36	32	5	8
6.....	655	359	296	198	191	26	11	18	31	4	6
7.....	354	196	158	83	68	40	18	30	42	8	5
8.....	409	232	177	111	69	29	30	21	28	7	11
9.....	455	263	192	130	67	46	38	31	40	19	22
10.....	307	139	168	50	41	50	79	13	21	8	11
11.....	280	119	161	53	48	33	57	7	24	7	14
12.....	354	182	172	62	46	66	65	17	28	18	15
13.....	486	267	219	162	121	12	3	65	73	11	14
14.....	389	206	183	113	98	24	10	30	54	19	11
15.....	357	170	187	101	87	16	16	32	54	5	17
16.....	334	170	164	80	74	32	29	27	27	9	16
17.....	499	248	251	121	123	38	32	56	60	18	21
18.....	444	242	202	122	104	45	36	36	31	10	14
19.....	477	221	256	121	106	23	25	48	84	4	17
20.....	579	284	295	133	119	71	77	29	41	21	36
21.....	431	230	201	98	83	60	56	23	29	19	17
22.....	460	237	223	122	102	28	30	45	38	9	15
23.....	390	195	195	93	83	40	41	22	25	7	17
24.....	446	223	223	114	103	59	53	21	30	13	26
25.....	302	152	150	82	57	35	41	16	26	9	11
Ward unknown.....	56	28	28	16	6	8	10	2	6	2	2
Total residents, each sex		5,214	4,863	2,623	2,175	896	849	732	956	285	374
Both sexes.....	10,077	10,077		4,798		1,745		1,688		659	
Nonresidents.....	1,243	718	525	90	62	419	299	78	49	44	55
Unknown.....	436	266	170	121	96	33	24	6	5	1	3
Totals, each sex.....		6,198	5,558	2,834	2,333	1,348	1,172	816	1,010	330	432
Totals, both sexes...	11,756	11,756		5,167		2,520		1,826		762	

* Except Boston.

TABLE X., *Continued.*—NATIVITY OF DECEDENTS BY COUNTRIES.

WARDS.	Great Britain.		Germany.		Italy.		Russia.		Norway and Sweden.		China.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	5	12	.....	1	4	2	5	2	2	4	.....	.....
2.....	10	10	.....	2	12	9	9	9	5	1	.....	.....
3.....	4	2	.....	1	.....	.....	1	.....	.....	1	.....	.....
4.....	1	3	1	.....	1	.....	.....	.....	.....	1	.....	.....
5.....	3	2	1	.....	.....	.....	1	.....	1	.....	.....	.....
6.....	2	1	.....	.....	83	39	13	12	1	.....	.....	.....
7.....	3	4	1	2	3	2	.....	.....	6	.....	10	.....
8.....	6	2	.....	.....	10	6	41	29	1	.....	.....	.....
9.....	4	8	4	3	7	1	14	10	2	.....	.....	.....
10.....	4	4	7	3	.....	2	.....	1	2	.....	.....	.....
11.....	3	5	1	2	.....	.....	5	5	2	.....	.....	1
12.....	7	6	3	3	.....	2	1	.....	3	.....	1	.....
13.....	2	.....	4	3	.....	1	8	3	2	.....	.....	.....
14.....	11	3	.....	4	.....	.....	1	1	3	.....	.....	.....
15.....	6	2	3	5	1	2	2	.....	2	.....	.....	.....
16.....	9	6	5	2	1	1	2	5	1	2	.....	.....
17.....	6	4	3	1	1	.....	2	2	1	3	.....	.....
18.....	10	7	6	2	1	.....	5	4	3	1	.....	.....
19.....	6	4	9	14	.....	.....	1	2	3	.....	.....	.....
20.....	15	8	5	6	.....	.....	8	4	2	1	.....	.....
21.....	10	6	8	5	.....	.....	3	2	2	.....	.....	.....
22.....	4	6	22	21	.....	.....	2	2	2	5	.....	.....
23.....	8	3	16	15	2	1	2	.....	3	6	1	.....
24.....	4	7	3	1	1	.....	.....	.....	6	2	1	.....
25.....	4	6	2	.....	1	1	1	2	2	1	.....	.....
Ward unknown.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....
Total residents, each sex.....	147	123	104	97	128	70	127	95	57	29	13	1
Both sexes.....	270		201		298		222		86		14	
Nonresidents.....	26	21	6	6	11	1	10	13	11	7	1	.....
Unknown.....	4	1	.....	.....	1	.....	.....	.....	1	1	1	.....
Totals, each sex..	177	144	110	103	140	71	137	108	69	37	15	1
Totals, both sexes,	321		213		211		245		106		16	

TABLE X., *Continued.*—NATIVITY OF DECEDENTS BY COUNTRIES.

WARDS.	France.		Turkey.		Austria.		Portugal.		Holland.		Belgium.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....							1	3	1			
2.....					1		1	2				
3.....								1				
4.....												
5.....								1				
6.....			1		1	2	3	2				
7.....	2	1	2	8	1							1
8.....		1			1							
9.....												
10.....	2											
11.....		2					1					
12.....	1	1										
13.....					1	1						
14.....		1									1	
15.....	1							1	1			2
16.....		1			1				1	1		
17.....	1					1		1				
18.....		1	1			2				1		
19.....						2						
20.....				1		1			1	1		
21.....					1	1				2		
22.....			1			2						
23.....												
24.....												
25.....		1										
Ward unknown...		1										
Total residents, each sex.....	7	10	5	9	7	12	6	11	4	5	1	3
Both sexes.....	17		14		19		17		9		4	
Nonresidents.....	3	1	2		2	1	1		1			
Unknown												
Totals, each sex..	10	11	7	9	9	13	7	11	5	5	1	3
Totals, both sexes,	21		16		22		18		10		4	

TABLE X., *Concluded*.—NATIVITY OF DECEDENTS BY COUNTRIES.

WARDS.	Switzer- land.		Greece.		Denmark.		Cuba and West Indies.		All Other Countries.		Unknown.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....					1						1	1
2.....					1		1				1	
3.....												
4.....												1
5.....											2	
6.....			3						1		5	1
7.....	1		4				1	2		1	1	4
8.....							1				4	1
9.....											6	3
10.....								1			3	5
11.....									3		4	3
12.....	1	1					1	1			1	3
13.....												
14.....									1		3	1
15.....											1	1
16.....											2	1
17.....												2
18.....			1		1						1	
19.....			1		1						3	1
20.....												1
21.....					1	1			1		3	
22.....	1						1					
23.....		2				1					1	1
24.....											1	1
25.....								2				2
Ward unknown...												
Total residents, each sex.....	4	3	9		5	2	5	6	6	1	43	33
Both sexes.....	7		9		7		11		7		76	
Nonresidents.....		1			2		1		3	1	7	8
Unknown.....											98	40
Totals, each sex..	4	4	9		7	2	6	6	9	2	148	81
Totals, both sexes.	8		9		9		12		11		229	

TABLE XI.—CAUSE OF DEATH. NATIVES OF BOSTON.

WARDS.	TOTAL, BOTH SEXES.	Total, Each Sex.		Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1.....	216	116	100	12	7	20	24	3	4	7	8	2	1
2.....	243	144	99	10	7	25	20	1	5	6	7	4	4
3.....	148	76	72	6	7	16	12	2	1	7	10	...	...
4.....	106	57	49	5	5	7	9	2	2	6	3	...	...
5.....	124	65	59	11	6	12	7	4	1	1	5	...	2
6.....	389	198	191	13	8	64	68	14	9	7	2	...	2
7.....	151	83	68	6	2	20	20	3	2	2	....	1	...
8.....	180	111	69	10	4	26	16	3	4	3	3	2	1
9.....	197	130	67	13	5	21	11	...	2	3	7	...	1
10.....	91	50	41	6	2	4	6	...	...	4	3	...	...
11.....	101	53	48	1	5	7	7	2	1	4	8	...	...
12.....	108	62	46	5	7	7	7	2	2	1	2	...	1
13.....	283	162	121	9	13	29	20	8	5	10	2	...	...
14.....	211	113	98	19	5	17	17	3	1	10	6	...	1
15.....	188	101	87	16	13	13	11	2	2	7	4	2	1
16.....	154	80	74	8	4	18	6	1	2	4	6	1	...
17.....	244	121	123	12	16	15	22	2	4	8	8	1	...
18.....	226	122	104	13	11	17	23	4	7	10	4	1	...
19.....	227	121	106	10	11	19	16	1	1	12	6	2	3
20.....	252	133	119	9	10	12	19	...	5	10	10	1	2
21.....	181	98	83	7	8	8	11	3	1	9	10	...	...
22.....	224	122	102	13	8	16	13	2	2	13	11	5	7
23.....	176	93	83	13	16	6	13	4	...	9	9	8	1
24.....	217	114	103	10	11	13	12	4	3	11	13	1	...
25.....	139	82	57	12	4	9	6	1	7	2	6	2	2
Ward unknown....	22	16	6	1	....	5	1	...	...	1	1	...	...
Total residents, each sex.....		2,623	2,175	250	195	426	397	71	73	167	154	33	29
Both sexes.....	4,798	4,798		445		823		144		321		62	
Nonresidents.....		90	62	8	2	7	5	...	...	4	5	2	...
Unknown.....		121	96	1	6	10	13	...	...	1	2	...	...
Totals, each sex.....		2,834	2,333	259	203	443	415	71	73	172	161	35	29
Totals, both sexes..	5,167	5,167		462		858		144		333		64	

TABLE XI., *Continued*.—CAUSE OF DEATH. NATIVES OF BOSTON.

WARDS.	Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs.		Cancer of Tissues.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1.....	5	3	16	7	1	2	...	1	2	...	...	1
2.....	1	...	19	8	2	2	...	1	...	1	1	...
3.....	1	1	9	8	2	5	...	1	1	1	...	...
4.....	...	...	7	7	2	...	...	...	...	...	...	1
5.....	2	...	8	1	4	2	...	1	1	1	...	...
6.....	...	1	20	10	2	3	...	1	...	...	...	...
7.....	1	...	11	10	2	...	...	...	1	1	...	...
8.....	2	...	12	6	1	4	...	...	...	1	...	...
9.....	2	2	13	6	2	2	...	...	1	1	...	...
10.....	...	...	8	3	...	2	...	2	...	...	...	1
11.....	3	2	5	2	...	3	...	...	2	1	...	...
12.....	...	1	6	1	3	2	...	...	2	1	1	1
13.....	1	...	22	16	1	4	...	...	...	...	...	...
14.....	1	4	7	12	2	2	...	...	...	4	1	...
15.....	2	2	17	12	1	2	...	1	...	1	...	...
16.....	3	1	9	9	1	3	...	1	1	1	1	...
17.....	2	2	12	12	4	1	...	...	...	1	...	3
18.....	...	1	13	7	1	1	...	2	...	...	...	...
19.....	...	2	6	11	4	4	...	...	1	1	...	...
20.....	4	7	19	8	6	5	...	2	2	2	...	1
21.....	6	5	6	5	3	3	...	1	1	...	...	3
22.....	1	1	10	7	3	3	...	1	2	3	...	1
23.....	1	...	5	7	1	2	...	1	1	2	...	...
24.....	2	2	10	9	2	4	...	1	...	1	...	1
25.....	2	1	6	1	2	1	...	...	...	1	...	...
Ward unknown.....	...	1	...	...	...	...	...	...	...	...	...	...
Total residents, each sex.....	42	39	276	185	52	62	...	17	18	25	4	13
Both sexes.....	81		461		114		17		43		17	
Nonresidents.....	2	3	5	1	2	7	...	1	...	1	...	...
Unknown.....	1	...	76	59	1	2	...	...	...	...	...	...
Totals, each sex.....	45	42	357	245	55	71	...	18	19	26	4	13
Totals, both sexes.....	87		602		126		18		45		17	

TABLE XI., *Continued.*—CAUSE OF DEATH. NATIVES OF BOSTON.

WARDS.	Diphtheria.		Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1.....	2	2	5	2	1	...	10	5	7	6	5	7
2.....	3	3	3	4	1	1	6	3	8	2	18	15
3.....	1	7	1	1	1	2	7	2	2	5	2	1
4.....	6	4	1	...	2	...	3	1	1	2	3	6
5.....	1	1	...	1	1	4	2	3	2	4	5	3
6.....	3	6	18	9	1	3	12	11	6	12	9	14
7.....	6	2	1	...	2	3	3	5	3	5	1	2
8.....	2	1	2	1	1	6	11	1	7	3	4	1
9.....	3	2	2	1	1	2	5	2	20	5	3	5
10.....	4	3	...	...	1	...	1	1	6	6	1	2
11.....	2	1	1	...	4	2	1	2	1	3	...	1
12.....	1	...	1	1	1	1	6	4	8	5	1	...
13.....	9	5	7	1	...	...	8	7	7	8	10	16
14.....	1	1	3	2	5	4	4	6	5	3	4	5
15.....	2	1	...	3	1	3	5	3	4	5	3	7
16.....	2	2	1	5	...	...	1	2	5	7	3	3
17.....	3	6	3	1	1	...	10	6	10	5	13	8
18.....	...	1	7	2	1	...	5	6	10	7	4	7
19.....	8	3	...	2	2	2	11	11	12	4	3	8
20.....	6	1	4	...	3	1	4	3	11	9	3	3
21.....	3	...	2	1	...	...	4	3	11	3	6	5
22.....	7	4	1	1	2	...	6	4	10	5	5	4
23.....	2	...	2	...	1	...	5	2	7	5	4	3
24.....	4	3	3	1	2	1	7	3	12	5	5	2
25.....	2	2	4	...	3	1	4	2	6	9	2	1
Ward unknown.....	...	...	...	...	...	...	...	...	4	...	1	...
Total residents, each sex.....	83	61	72	39	38	36	141	98	185	133	118	129
Both sexes.....	144		111		72		239		318		247	
Nonresidents.....	2	2	...	...	...	...	2	1	12	14	1	...
Unknown.....	...	2	2	...	1	1	4	...	7	4	1	1
Totals, each sex.....	85	65	74	39	39	37	147	99	204	151	120	130
Totals, both sexes.....	150		113		76		246		355		250	

TABLE XI., *Concluded*.—CAUSE OF DEATH. NATIVES OF BOSTON.

WARDS.	Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1.....			15	16	....	3	3	...			...	1
2.....			30	13	4	2	...				2	1
3.....			14	5	2	2	...				2	1
4.....			8	9	2	...					2	...
5.....	1	...	5	14	5	1	...				...	2
6.....			20	24	7	8	...				2	...
7.....			15	14	4	1	1	...			...	1
8.....		1	18	12	5	2	1	1	...		1	1
9.....	2	...	26	13	10	...					3	...
10.....			11	9	3	1	...				1	...
11.....	2	...	13	10	5	...					...	
12.....			17	8	....	1	...				...	1
13.....			26	21	11	2	1	...	1	...	2	1
14.....			26	20	4	1	...	1	...		1	3
15.....			24	15	1	1	...				1	...
16.....	2	2	13	18	5	1	...				1	1
17.....		1	23	23	1	3	...				1	1
18.....		1	32	20	3	2	...				1	2
19.....			28	17	1	3	...				1	1
20.....	1	...	29	29	5	2	3	...			1	...
21.....	1	1	23	21	2	1	1	...	1	...	1	1
22.....	1	...	18	26	3	1	1	...	2	...	1	...
23.....			18	19	5	3	1	...			...	
24.....		1	20	23	5	3	1	1	1	2	1	1
25.....			19	13	6	...					...	
Ward unknown.....			2	3	2	...					...	
Total residents, each sex.....	10	7	493	415	101	44	13	3	5	2	25	19
Both sexes.....	17		908		145		16		7		44	
Nonresidents.....	1	1	30	17	6	2	3	...			2	...
Unknown.....			12	6	1	...	1	...			2	...
Totals, each sex.....	11	8	535	438	108	46	17	3	5	2	29	19
Totals, both sexes.....	19		973		154		20		7		48	

TABLE XII.—DEATHS: PARENTAGE OF DECEDENTS (GENERAL). RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN.

WARDS.	TOTAL, BOTH SEXES.	Total, Each Sex.		Both Parents Native.		Father Native, Mother Foreign.		Mother Native, Father Foreign.	
		M.	F.	M.	F.	M.	F.	M.	F.
1.....	424	220	204	52	44	17	7	11	10
2.....	430	235	195	28	17	12	5	14	7
3.....	280	140	140	34	28	8	5	7	4
4.....	225	118	107	23	21	10	8	7	4
5.....	254	138	116	27	17	7	4	7	5
6.....	655	359	296	10	12	2	.....	4	3
7.....	354	196	158	36	18	8	7	9	3
8.....	409	232	177	14	18	2	1	8	5
9.....	455	263	192	57	35	12	7	8	6
10.....	307	139	168	44	61	8	6	7	7
11.....	280	119	161	54	67	2	3	3	2
12.....	354	182	172	67	60	14	4	5	1
13.....	486	267	219	30	15	9	5	13	9
14.....	389	206	183	46	29	8	12	6	6
15.....	357	170	187	30	34	13	12	11	8
16.....	334	170	164	43	39	12	10	8	8
17.....	499	248	251	46	51	13	11	12	14
18.....	444	242	202	62	45	12	16	15	8
19.....	477	221	256	40	35	14	6	14	8
20.....	579	284	295	103	85	14	18	14	11
21.....	431	230	201	77	72	10	3	14	8
22.....	460	237	223	52	45	8	9	11	12
23.....	390	195	195	58	49	12	7	11	7
24.....	446	223	223	81	71	23	6	8	15
25.....	302	152	150	45	49	7	2	14	5
Ward unknown.....	56	28	28	2	8	.....	.....	1	1
Total residents, each sex.....	.....	5,214	4,863	1,161	1,025	257	174	242	177
Both sexes.....	10,077	10,077		2,186		431		419	
Nonresidents.....	1,243	718	525	253	166	25	26	30	18
Unknown.....	436	266	170	10	10	1	3	3	.....
Totals, each sex.....	.....	6,198	5,558	1,424	1,201	283	203	275	195
Totals, both sexes.....	11,756	11,756		2,625		486		470	

TABLE XII., *Continued.*—DEATHS: PARENTAGE OF DECEDENTS (GENERAL). RESIDENTS BY WARDS, NON-RESIDENTS AND UNKNOWN.

WARDS.	Both Parents Foreign, Same Country.		Both Parents Foreign, Different Countries.		Father Native, Mother Unknown.		Mother Native, Father Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.
1.....	98	120	9	11	2	2	5	1
2.....	159	142	10	8	2	.....	1	1
3.....	72	83	11	8	2	.....	.....	2
4.....	64	56	7	5	1	.....	1	1
5.....	84	80	3	3	1	2	1	1
6.....	322	268	4	4	1	1	.....	.....
7.....	104	105	5	6	3	1	2	1
8.....	181	130	8	6	1	.....	.....	1
9.....	141	112	14	5	.....	1	4	4
10.....	52	58	3	5	2	1	4	5
11.....	41	61	4	2	.....	3	1	5
12.....	81	67	2	7	.....	4	1	3
13.....	196	174	9	5	3	1	.....	.....
14.....	125	111	9	4	1	.....	3	1
15.....	102	111	10	8	.....	2	.....	.....
16.....	78	77	13	11	1	.....	3	6
17.....	150	125	15	16	1	2	3	5
18.....	112	95	12	11	3	1	3	12
19.....	134	169	7	10	1	.....	.....	5
20.....	122	134	8	13	6	4	2	7
21.....	99	87	11	13	1	3	3	3
22.....	148	134	9	4	.....	2	.....	3
23.....	97	103	5	7	2	6	1	4
24.....	82	96	5	8	4	3	5	4
25.....	68	78	8	6	.....	.....	5	.....
Ward unknown.....	12	15	.....	.....	.....	.....	2	.....
Total residents, each sex..	2,924	2,791	201	186	38	39	50	75
Both sexes.....	5,715		387		77		125	
Nonresidents.....	273	228	26	13	16	11	16	7
Unknown.....	15	11	6	8	1	.....	57	53
Totals, each sex.....	3,212	3,030	233	207	55	50	123	135
Totals, both sexes.....	6,242		440		105		258	

TABLE XII., *Concluded*.—DEATHS: PARENTAGE OF DECEDENTS (GENERAL). RESIDENTS BY WARDS, NONRESIDENTS AND UNKNOWN.

WARDS.	Father Foreign, Mother Unknown.		Mother Foreign, Father Unknown.		Both Unknown.	
	M.	F.	M.	F.	M.	F.
1.....	4	2	2	2	20	5
2.....	5	5	.....	2	4	8
3.....	.....	1	.....	1	6	8
4.....	2	3	1	1	2	8
5.....	2	.....	1	.....	5	4
6.....	2	2	.....	2	14	4
7.....	4	4	5	2	20	11
8.....	2	5	1	3	15	8
9.....	3	3	.....	2	24	17
10.....	2	2	1	3	16	20
11.....	.....	2	1	1	13	15
12.....	2	3	1	2	9	21
13.....	1	4	2	3	4	3
14.....	.....	7	.....	3	8	10
15.....	.....	1	1	2	3	9
16.....	6	2	1	1	5	10
17.....	4	7	.....	.....	4	20
18.....	3	2	1	1	19	11
19.....	.....	6	2	2	9	15
20.....	3	7	2	2	10	14
21.....	2	4	.....	.....	13	8
22.....	2	4	.....	.....	7	10
23.....	1	4	.....	1	8	7
24.....	5	7	.....	.....	10	13
25.....	2	2	.....	.....	3	8
Ward unknown.....	2	.....	2	1	7	3
Total residents, each sex.....	59	89	24	37	258	270
Both sexes.....	148		61		528	
Nonresidents.....	13	16	4	11	62	29
Unknown.....	.....	1	47	29	126	55
Totals, each sex.....	72	106	75	77	446	354
Totals, both sexes.....	178		152		800	

DEATHS IN INSTITUTIONS IN 1908.

The total number of deaths in hospitals, homes and other institutions for the care of the sick and infirm in 1908 was 4,412; of these 2,451 were males and 1,961 females; 2,990 were residents of this city, 1,654 males and 1,336 females; 1,031 were nonresidents, 571 males, 460 females; and of 391 the residence was unknown, 226 were males and 165 were females. The number of residents of each ward who died in the various institutions of the city is given below:

Ward.	Males.	Females.	Total.	Ward.	Males.	Females.	Total.
1.....	45	30	75	16.....	49	45	94
2.....	70	46	116	17.....	81	77	158
3.....	40	34	74	18.....	82	53	135
4.....	41	27	68	19.....	60	62	122
5.....	42	34	76	20.....	69	58	127
6.....	105	77	182	21.....	50	31	81
7.....	96	69	165	22.....	71	67	138
8.....	95	85	180	23.....	62	38	100
9.....	105	82	187	24.....	46	39	85
10.....	53	63	116	25.....	41	21	62
11.....	46	58	104	Unknown....	27	26	53
12.....	80	66	146				
13.....	94	66	160				
14.....	56	41	97				
15.....	48	41	89				
				Totals....	1,654	1,336	2,990

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	1	10	13	3	3	2	...	...	...	1	...	17	6	...	...	...	...	...	...	...	...	...	...
1 year	...	...	5	5	...	1	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	1
2 to 4 years.....	...	...	4	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
5 to 9 “	1	...	1	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
10 to 14 “	...	...	...	1	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	1	1	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	5	4	...	...	...	...	1	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	2	2	...	...	...	...	1	...	...	2	1	...	...	...	...	...	...	...	1	...	...	...	...	...
30 to 34 “	3	3	...	1	...	...	1	...	2	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
35 to 39 “	1	1	...	2	...	...	1	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
40 to 44 “	...	5	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
45 to 49 “	4	2	1	2	...	...	...	...	...	...	2	...	...	...	...	...	1	...	1	...	...	...	...	...
50 to 54 “	1	...	1	...	...	...	1	...	...	...	2	3	...	...	1	...	1	...	...	...	2	...	...	...
55 to 59 “	2	...	2	1	...	...	4	1	1	...	1	...	...	...	2	1	...	1	...	1	...	...	...	...
60 to 64 “	...	...	...	1	...	1	1	...	...	...	4	4	...	...	1	1	...	...	1	...	...	1	...	...
65 to 69 “	...	...	2	...	...	...	2	3	...	...	1	1	...	...	3	...	...	3	1	...	...	...	...	...
70 to 74 “	...	...	...	1	...	1	1	5	...	...	4	1	...	...	...	3	...	...	1	1	1	...	...	...
75 to 79 “	...	...	...	1	1	...	4	1	...	...	2	1	...	...	...	1	...	...	1	1	...	...	...	...
80 to 84 “	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	20	19	28	36	4	8	22	19	3	5	17	12	18	7	8	10	...	4	6	6	1	5	2	2

AGE PERIODS AND WARDS. WARD I.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	6	2	....	...	3	5	7	6	3	5	....	...	10	10	1	...	....	...	....	...	1	...
1 year.....		...		...	1	..	....	...	1	2	....	...	....	1	....	1	....	...	....	...	....	...
2 to 4 years.		...		...	5	1	....	...	1	...	....	...	1	3	....	...	....	...	....	...	....	...
5 to 9 “		...	1	...	1	...	....	...	....	...	....	...	....	3	....	1	....	...	....	...	....	...
10 to 14 “		...		...		...		...		...		...	1	...	....	...	....	...	....	...	....	...
15 to 19 “		...		...	1	...	....	...	....	...	....	...	1	1	....	...	....	...	....	...	....	...
20 to 24 “		...		...		...		...		...		...	1	...	1	....	....	...	....	...	1	...
25 to 29 “		...		...		...		...		...		...	2	2	3	...	2	...	1	...	....	...
30 to 34 “		...		...		...		...		...		...	1	...	1	...	2	....	....	...	....	...
35 to 39 “		...		...		...		...		...		...		...	1	....	....	...	....	...	....	...
40 to 44 “		...		...		...		...		1	....	...	....	...	1	....	....	...	....	...	....	...
45 to 49 “		...		...		...		...		1	....	...	6	1	1	...	..	1	....	...	....	...
50 to 54 “		...		...		...		...	1	...	....	...	2	3	....	...	1	....	...	....	...	...
55 to 59 “		...		...		...		...		...		...	2	3	....	...	....	...	....	...	1	...
60 to 64 “		...		...		...		...		...		...	4	2	....	...	....	...	....	...	1	...
65 to 69 “		...		...		...		...		...		...	3	...	....	...	....	...	....	...	....	...
70 to 74 “		...		...		...		...		...		...	2	3	1	...	....	...	....	...	....	...
75 to 79 “		...		...		...		...		...		...	4	2	....	...	....	...	....	...	....	...
80 to 84 “		...		...		...		...	1	...	3	3	1	...	1	....	...	...	....	...	....	...
85 to 89 “		...		...		...		...		...		...		1	....	...	....	...	....	...	....	...
90 to 94 “		...		...		...		...		...	1	....	....	...	....	...	....	...	....	...	....	...
95 and over...		...		...		...		...		...		...		...		...		...		...		...
	6	2	1	...	11	6	7	6	6	10	....	4	43	36	9	4	4	2	1	...	3	1

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	8	9	1	5	...	3	...	...	...	...	17	7	...	...	...	...	...	...	...	...	...	...
1 year	...	1	9	6	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	1
2 to 4 years	...	2	4	5	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	2
5 to 9 “	1	1	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...
10 to 14 “	...	...	1	1	...	...	2	1	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
15 to 19 “	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	1	1	...	...	...	...	...	3	1	1	...	...	...	...	...	1	...	1	...	...	...	...	...	...
25 to 29 “	3	...	...	2	...	...	...	3	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
30 to 34 “ ...	4	...	1	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
35 to 39 “	5	1	...	1	...	...	1	3	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
40 to 44 “	...	1	2	...	...	...	3	...	1	1	...	...	...	...	...	2	...	...	...	1	...	...	...	...
45 to 49 “	2	...	...	1	...	...	...	1	1	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...
50 to 54 “	1	1	...	1	...	...	4	2	...	...	...	...	...	...	2	1	...	...	2	...	1	...	...	...
55 to 59 “	...	...	...	...	3	...	3	1	...	...	...	1	...	...	1	1	...	1	2	2	1	...	...	...
60 to 64 “	3	1	1	2	...	1	4	3	...	...	2	1	...	...	1	...	...	...	2	1	...	1	...	...
65 to 69 “	...	...	1	2	...	1	2	2	...	...	2	...	...	...	1	2	...	...	2	2	1	...	...	...
70 to 74 “	...	1	...	...	1	...	1	2	...	...	...	1	...	...	...	1	...	...	2	1	...	...	...	...
75 to 79 “	...	...	...	...	...	...	2	1	...	...	2	1	...	...	...	...	...	...	1	...	...	...	...	...
80 to 84 “	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	20	10	28	35	6	7	24	26	6	5	6	4	19	9	7	11	...	3	11	8	3	2	3	3

AGE PERIODS AND WARDS. WARD II.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	3	4	....	....	4	2	8	2	16	8	....	....	19	12	....	....	....	....	....	....	1	1
1 year.....		1	....	....	1	1	....	....	2	4	....	....	2	....	....	....	....	....	....	....	....	....
2 to 4 years.					2	....	....	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....
5 to 9 “ ..			1	1	....	....	....	....	....	1	....	....	2	....	1	1	....	....	....	....	1	....
10 to 14 “ ..									1	....	....	....	3	....	1	....	....	....	....	....	....	....
15 to 19 “ ..													1	....	1	....	....	....	....	....	....	....
20 to 24 “ ..														2	....	....	....	....	....	....	....	....
25 to 29 “ ..														1	1	....	....	....	....	....	....	....
30 to 34 “ ..													2	2	4	....	....	....	....	....	....	....
35 to 39 “ ..													5	3	1	1	....	....	....	....	....	....
40 to 44 “ ..						1	....	....	....	....	....	....	1	2	2	....	....	....	....	....	....	....
45 to 49 “ ..													2	....	....	....	....	....	....	....	....	....
50 to 54 “ ..						2	....	....	1	....	....	....	1	....	1	1	....	....	....	....	1	....
55 to 59 “ ..														1	1	....	....	....	....	....	....	....
60 to 64 “ ..														1	....	....	....	....	....	....	....	....
65 to 69 “ ..														4	....	....	....	....	....	....	....	1
70 to 74 “ ..									1	....	....	....	....	2	1	....	....	....	....	....	....	....
75 to 79 “ ..											1	2	1	....	....	....	....	....	....	....	....	....
80 to 84 “ ..											1	1	....	1	....	....	....	....	....	....	....	....
85 to 89 “ ..											1	1	....	1	....	....	....	....	....	....	....	....
90 to 94 “ ..												1	....	1	....	....	....	....	....	....	....	....
95 and over....																						
	3	5	1	1	7	6	8	2	21	16	1	4	44	33	14	3	....	....	....	....	3	2

TABLE XIII. — DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.	...	...	4	4	2	1	...	...	...	...	1	...	8	8	...	...	...	...	...	...	...	...	...	...
1 year.	1	1	3	2	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
2 to 4 years	...	...	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
5 to 9 “	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3	1
10 to 14 “	...	...	...	1	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	...	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
25 to 29 “	...	2	2	...	...	...	5	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
30 to 34 “	...	1	1	1	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
35 to 39 “	...	...	2	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
40 to 44 “	...	2	1	2	...	...	1	3	1	...	...	...	...	...	1	1	...	...	1	1	...	...	...	...
45 to 49 “	...	...	1	2	...	...	2	1	...	...	1	...	...	...	1	2	...	...	...	...	1	...	...	...
50 to 54 “	...	1	...	...	...	...	1	1	...	...	...	...	...	...	1	2	...	...	1	1	1	...	...	...
55 to 59 “	...	1	...	...	1	...	3	1	...	...	1	1	...	...	1	...	...	...	1	...	...	...	...	...
60 to 64 “	...	...	...	...	3	1	...	1	3	...	...	3	...	...	...	1	...	...	1	...	...	...	...	...
65 to 69 “	...	...	...	2	1	...	...	1	...	...	3	2	...	...	1	1	...	...	1	1	...	...	...	...
70 to 74 “	...	...	...	...	1	...	1	2	...	...	1	2	...	...	1	...	...	...	1	...	...	...	...	...
75 to 79 “	...	...	...	...	...	...	1	1	5	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...
80 to 84 “	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	10	13	22	18	3	3	18	23	1	...	7	11	9	8	7	10	...	1	6	3	1	1	3	8

AGE PERIODS AND WARDS. WARD III.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	1	....	....	3	1	2	5	2	2	....	....	8	3	....	....	....	....	....	....	....	....
1 year.....			1	....	1	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
2 to 4 years.				2	1	....	....	....	....	....	....	....	....	1	....	2	....	....	....	....	1	....
5 to 9 "					1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10 to 14 "					1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15 to 19 "														1	....	....	....	....	....	....	....	....
20 to 24 "																						1
25 to 29 "														2	1	....	....	....	....	....	....	....
30 to 34 "														1	....	2	....	....	....	....	....	....
35 to 39 "														1	....	1	....	....	....	....	1	1
40 to 44 "					1	....	....	....	....	....	....	....	....	1	1	1	....	....	....	....	1	2
45 to 49 "														3	2	1	....	....	....	....	....	....
50 to 54 "														1	....	1	....	....	....	....	....	....
55 to 59 "														2	2	....	....	....	....	....	....	....
60 to 64 "														2	....	1	....	....	....	....	1	....
65 to 69 "														1	1	....	....	....	....	....	....	....
70 to 74 "														6	1	....	....	....	....	....	....	....
75 to 79 "														2	....	1	....	....	....	....	....	1
80 to 84 "															1	1	....	....	....	....	....	....
85 to 89 "														1	....	....	....	....	....	....	....	....
90 to 94 "															1	....	....	....	....	....	....	....
95 and over...																						
	1	1	1	2	8	3	2	5	2	2	....	....	28	18	7	5	....	....	....	....	4	5

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuber- culosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Maras- mus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	1	2	1	...	3	2	...	...	...	...	6	5	...	...	...	...	...	...	...	...	...	...
1 year.....	...	...	3	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	1
2 to 4 years....	1	...	1	3	...	1	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	1	2	
5 to 9 “	...	...	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	
10 to 14 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
15 to 19 “	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20 to 24 “	...	2	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25 to 29 “	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30 to 34 “	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
35 to 39 “	...	1	2	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	
40 to 44 “	...	...	1	2	1	...	2	1	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	
45 to 49 “	...	2	...	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	
50 to 54 “	...	3	...	1	...	...	2	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	
55 to 59 “	...	1	...	1	3	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	
60 to 64 “	...	...	...	...	1	...	1	1	1	...	...	2	1	...	...	...	...	2	...	...	1	...	...	
65 to 69 “	...	1	...	2	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	
70 to 74 “	...	...	1	1	2	1	...	1	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	
75 to 79 “	...	...	...	...	1	...	...	1	3	...	...	2	...	...	...	...	...	1	...	...	...	...	...	
80 to 84 “	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
85 to 89 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	17	11	14	16	3	2	13	13	...	...	4	4	8	7	3	1	...	1	4	2	1	3	7	5

AGE PERIODS AND WARDS. WARD IV.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	...	...	...	1	...	1	2	3	5	...	...	4	5	...	...	...	...	...	...	...	...
1 year.....	...	...	...	...	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
2 to 4 years.	...	...	1	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
5 to 9 "	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...
10 to 14 "	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 "	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
20 to 24 "	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
25 to 29 "	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...
30 to 34 "	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...
35 to 39 "	...	...	...	...	...	...	...	...	1	...	...	...	2	1	...	...	...	...	...	...	...	...
40 to 44 "	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1	...	...	...	...	...	...
45 to 49 "	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...
50 to 54 "	...	...	...	...	...	...	...	...	...	...	...	...	2	4	2	...	...	...	...	...	...	...
55 to 59 "	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	...	...
60 to 64 "	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
65 to 69 "	...	...	...	...	...	...	...	1	...	...	...	...	1	3	...	...	...	...	...	...	...	...
70 to 74 "	...	...	...	...	...	...	...	...	1	...	1	1	1	1	1	...	...	...	...	1	...	...
75 to 79 "	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
80 to 84 "	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 "	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
90 to 94 "	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...
95 and over..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	2	1	4	1	1	2	5	9	2	5	16	22	10	2	...	...	...	...	3	...

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	2	...	7	2	1	...	...	...	...	...	...	...	8	1	...	...	...	...	...	...	...	...	1	...
1 year.....	1	...	3	2	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
2 to 4 years....	...	...	2	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5 to 9 “....	1	...	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
10 to 14 “....	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “....	...	...	3	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “....	...	...	2	1	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “....	...	2	3	1	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
30 to 34 “....	...	...	2	...	...	...	...	...	1	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...
35 to 39 “....	...	4	1	1	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
40 to 44 “....	...	3	2	1	...	...	1	4	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
45 to 49 “....	...	5	1	1	...	...	3	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
50 to 54 “....	...	...	1	1	3	...	...	...	...	...	3	...	...	...	3	...	1	...	1	...	...	...	...	...
55 to 59 “....	...	...	1	...	...	1	2	1	...	...	...	1	...	...	...	1	...	1	1	1	...	...	...	...
60 to 64 “....	...	...	...	2	3	2	...	3	1	...	...	1	...	...	2	1	...	...	2	...	...	...	...	...
65 to 69 “....	...	...	...	1	...	...	1	1	...	...	3	1	...	...	...	1	...	...	...	1	...	...	...	...
70 to 74 “....	...	...	1	...	2	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
75 to 79 “....	...	...	...	...	...	...	...	1	...	...	2	1	...	...	...	...	1	...	...	...	...	...	...	...
80 to 84 “....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
85 to 89 “....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	18	18	22	16	5	1	13	13	2	2	8	6	9	1	11	5	...	4	3	4	...	...	1	2

AGE PERIODS AND WARDS, WARD V.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..		2	....	....	....	2	2	4	5	1	....	....	5	9	....	....	....	....	....	....	....	2
1 year				2	1	....	....	....	1	2	....	....	....	1	....	....	....	....	....	....	....	....
2 to 4 years.				1	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....
5 to 9 “	..														1	....	....	....	....	....	....	....
10 to 14 “	..		1	1	....	2	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....
15 to 19 “	..													1	1	....	....	....	....	....	....	....
20 to 24 “	..														1	....	....	....	....	....	....	....
25 to 29 “	..														1	....	....	....	....	....	....	....
30 to 34 “	..					1	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....
35 to 39 “	..					1	....	....	....	....	....	....	2	2	1	....	....	....	....	....	....	....
40 to 44 “	..													1	....	....	1	....	....	....	1	....
45 to 49 “	..	..											1	1	1	1	....	1	....	....	....	....
50 to 54 “	..												1	1	1	....	....	....	....	....	....	....
55 to 59 “	..												1	....	....	....	....	....	....	....	....	....
60 to 64 “	..												1	1	....	....	....	....	....	....	....	....
65 to 69 “	..																					
70 to 74 “	..												1	....	....	....	....	....	....	....	....	....
75 to 79 “	..									1	....	....	2	....	1	....	....	....	....	....	....	....
80 to 84 “	..										1	....	....	1	....	....	....	....	....	....	....	....
85 to 89 “	..										3	....	1	1	....	....	....	....	....	....	....	....
90 to 94 “	..										1	....	....	....	....	....	....	....	....	....	....	1
95 and over...																						
		2	1	4	3	4	2	4	6	4	5	...	15	20	11	2	2	1	....	....	1	3

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	1	...	38	37	13	9	2	1	...	...	...	...	19	10	1	...	...	...	...	...	...	...	1	2
1 year.....	1	1	24	25	3	...	1	...	...	1	...	...	1	1	...	...	...	...	...	...	...	2	2	
2 to 4 years....	2	1	6	6	1	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	2	2	
5 to 9 “	1	1	1	1	...	1	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...
10 to 14 “	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
15 to 19 “	2	1	...	1	...	...	1	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	3	1	3	1	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...
25 to 29 “	1	2	...	...	...	...	2	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
30 to 34 “	2	4	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
35 to 39 “	2	...	1	...	...	1	1	2	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
40 to 44 “	1	2	5	...	...	1	7	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45 to 49 “ ...	2	2	2	...	...	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
50 to 54 “	2	1	3	2	1	...	...	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
55 to 59 “	2	2	2	...	1	...	2	...	...	...	3	1	...	...	2	...	...	1	...	...	2	...	...	...
60 to 64 “	...	1	1	...	...	1	3	2	...	...	...	2	...	...	2	...	...	...	...	1	...	...	...	...
65 to 69 “ ..	...	...	1	...	...	1	2	4	...	...	2	...	...	...	1	1	...	...	2	...	...	...	...	...
70 to 74 “	...	...	2	1	...	1	1	1	...	...	3	1	...	...	...	...	...	...	1	1	...	...	...	...
75 to 79 “	...	1	2	...	1	...	...	1	...	...	2	1	...	...	...	1	...	...	...	...	...	...	...	...
80 to 84 “	...	...	...	2	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	23	20	94	80	20	16	30	15	3	3	11	6	21	11	9	8	...	1	4	3	...	2	5	7

AGE PERIODS AND WARDS. WARD VI.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	16	7	....	...	6	3	6	12	7	11	...	...	16	15	...	...	...	...	...	...	1	...
1 year.....	4	2	....	1	4	4	....	...	1	2	...	...	3	6	....	2	...	...	...	...	...	...
2 to 4 years.		...	1	2	5	4	....	...	1	...	...	...	3	...	2	3	...	...	...	...	...	...
5 to 9 “	..		..		...	1	....	...	...	1	....	...	1	1	3	2	....	...	...	...	...	...
10 to 14 “	..		..		1	...	....	...	...	...	...	...	...	3	1	...	...	...	...	...	...	...
15 to 19 “	..		1	...	2	...	....	...	...	...	...	...	...	5	3	...	...	...	...	...	...	...
20 to 24 “	..			...	2	...	....	...	...	...	...	...	1	4	3	...	...	...	1	...	...	...
25 to 29 “	..			...	...	...		...	...	...	...	...	...	2	2	1	2	...	1	...	...	...
30 to 34 “	..			...	...	1	....	...	1	...	...	...	2	1	1	1	....	...	1	...	...	...
35 to 39 “	..			...	...	...		...	...	...	...	...	1	1	2	2	1	...	...	...	...	...
40 to 44 “	..			...	...	...		...	...	...	...	...	2	1	2	...	1	...	...	1	...	...
45 to 49 “	..			...	...	...		...	...	...	...	...	2	2	1	1	....	...	1	...	...	2
50 to 54 “	..			...	1	...	....	...	...	...	...	...	3	2	1	...	...	...	...	...	...	...
55 to 59 “	..			...	...	...		...	...	...	...	...	...	1	2	2	...	...	...	...	...	...
60 to 64 “	..			...	...	...		...	...	...	...	...	...	2	2	...	...	...	...	...	...	...
65 to 69 “	..			...	...	...		...	1	2	...	...	1	2	1	1	....	...	...	...	3	...
70 to 74 “	..			...	...	...		...	...	...	1	...	2	2	...	...	...	...	...	1	...	...
75 to 79 “	..			...	...	...		...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
80 to 84 “	..			...	...	...		...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	..			...	...	...		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	..			...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over...	..			...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	20	9	2	3	21	13	6	12	11	16	2	2	37	51	27	15	4	...	3	1	6	2

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital.)		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	1	1	8	11	3	2	1	...	...	...	...	...	9	9	...	...	...	...	...	...	...	...	...	...
1 year	...	...	7	6	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...
2 to 4 years	...	...	5	4	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	4	3
5 to 9 “	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
10 to 14 “	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	2	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	4	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	4	3	1	...	...	...	3	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
30 to 34 “	2	2	1	...	...	...	2	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
35 to 39 “	3	1	2	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...
40 to 44 “	4	...	1	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...
45 to 49 “	2	...	3	...	1	...	2	2	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...
50 to 54 “	...	...	1	...	...	...	5	3	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...
55 to 59 “	3	1	...	1	...	...	2	1	...	...	2	2	...	...	...	1	...	1	1	...	...	1	...	...
60 to 64 “	...	2	...	1	...	1	1	1	...	...	1	...	...	...	2	1	...	1	1	...	...	...	...	...
65 to 69 “	...	...	1	3	...	...	3	2	...	...	2	3	...	...	1	...	...	1	1	...	...	...	...	...
70 to 74 “	...	...	...	3	...	...	4	3	...	...	...	1	...	...	1	2	...	...	1	1	...	...	...	...
75 to 79 “	...	...	...	...	...	...	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
80 to 84 “	...	...	...	...	...	...	2	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	25	12	31	33	4	3	30	17	3	...	7	7	11	10	13	7	...	3	5	3	1	...	6	4

AGE PERIODS AND WARDS. WARD VII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	...	1	...	...	2	3	5	1	2	...	...	7	9	...	1	...	...	...	...	...	1
1 year.....	...	...	1	...	2	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
2 to 4 years.	...	...	...	3	1	1	...	...	...	...	...	...	1	...	...	2	...	...	...	...	...	1
5 to 9 "	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
10 to 14 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
15 to 19 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
20 to 24 "	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	...	...	...	...	...	...
25 to 29 "	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1	...	...	...	...	...	...
30 to 34 "	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
35 to 39 "	...	...	...	...	...	1	...	...	...	...	...	...	4	2	...	1	2	...	...	...	...	...
40 to 44 "	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3	1	2	...	...	...	...	...
45 to 49 "	...	...	...	...	...	...	...	...	...	...	...	...	3	1	3	...	...	...	...	...	...	...
50 to 54 "	...	...	...	...	1	...	...	...	...	...	...	...	2	3	1	...	...	...	...	1	...	...
55 to 59 "	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
60 to 64 "	...	...	...	...	...	...	...	...	...	1	...	...	1	3	...	...	...	...	...	...	...	...
65 to 69 "	...	...	...	...	...	...	...	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...
70 to 74 "	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	1	1	...	...	...	...	...
75 to 79 "	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...
80 to 84 "	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
85 to 89 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	2	3	4	6	3	5	1	4	2	1	32	29	10	8	5	...	...	1	...	2

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	16	11	2	3	...	2	...	...	1	...	11	5	...	1	...	...	...	...	...	...	...	...
1 year.....	...	1	10	6	...	...	1	...	1	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...
2 to 4 years	...	...	3	...	1	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	2	1	...
5 to 9 “	2	1	1	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
10 to 14 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	1	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	3	2	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
25 to 29 “	1	1	1	...	...	...	1	1	1	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...
30 to 34 “	2	2	1	...	1	...	3	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 to 39 “	4	1	...	...	...	...	2	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
40 to 44 “	3	2	2	2	...	...	3	2	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
45 to 49 “	2	1	...	4	...	1	...	2	...	...	2	...	...	...	...	1	...	...	3	1	...	...	...	...
50 to 54 “	3	...	1	...	...	...	4	3	...	...	1	...	...	...	1	1	...	...	...	...	...	...	...	...
55 to 59 “	1	...	2	4	...	2	1	3	...	...	1	...	...	...	2	2	...	...	...	...	...	...	...	...
60 to 64 “	1	2	...	1	...	...	3	1	...	...	2	...	...	...	...	2	...	1	...	1	...	...	...	...
65 to 69 “	...	1	3	3	...	...	2	1	...	...	2	...	...	...	1	...	...	...	...	...	1	...	...	...
70 to 74 “	3	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...
75 to 79 “	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80 to 84 “	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
85 to 89 “	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	26	14	46	33	3	7	19	19	4	2	9	4	14	6	8	13	...	2	4	4	...	1	2	1

AGE PERIODS AND WARDS. WARD VIII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	1	....	....	8	1	7	3	3	....	....	....	12	5	....	....	....	....	....	....	....	1
1 year.....	1	....	....	4	1	1	....	....	....	1	....	....	2	6	....	....	....	....	....	....	....	....
2 to 4 years.			1	3	2	....	....	....	1	....	....	....	3	1	1	2	....	....	....	....	....	....
5 to 9 “				3	....	....	....	....	....	....	....	....	1	....	2	....	....	....	....	....	....	....
10 to 14 “													1	....	1	....	....	....	....	....	....	....
15 to 19 “						1	....	....	....	....	....	....	1	2	....	....	....	....	....	....	....	....
20 to 24 “					1	2	....	....	....	....	....	....	....	2	1	....	....	....	....	....	....	....
25 to 29 “					1	....	....	....	....	....	....	....	3	5	2	....	1	....	....	....	....	....
30 to 34 “													1	2	1	....	....	1	....	....	....	1
35 to 39 “													2	2	1	1	1	....	....	....	....	....
40 to 44 “													2	1	....	....	....	....	....	....	1	....
45 to 49 “													1	4	3	....	....	....	....	....	....	....
50 to 54 “															1	....	1	....	....	....	1	....
55 to 59 “											1	....	4	2	....	....	....	....	....	....	....	....
60 to 64 “									2	....	....	....	1	3	1	2	....	....	....	....	1	....
65 to 69 “									1	....	....	....	3	....	2	....	....	....	....	....	1	....
70 to 74 “													4	1	1	....	....	....	....	....	....	....
75 to 79 “											1	....	1	1	....	1	....	....	....	....	....	....
80 to 84 “											1	1	....	1	....	1	....	....	....	....	....	....
85 to 89 “																						
90 to 94 “																						
95 and over...																						
	2	1	1	10	13	5	7	3	7	1	1	3	42	38	17	7	3	1	....	....	4	2

TABLE XIII. — DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....			8	5		1	1	4				1	13	7										
1 year.....			6	3																			1	1
2 to 4 years.....			4	3		1				1													1	1
5 to 9 “		1	1					1								1							1	
10 to 14 “																1								
15 to 19 “							1	2								1								
20 to 24 “		1	1	1			1									1								
25 to 29 “		2	3	2			1				2					1								
30 to 34 “		5	4	1	2		1		2							2	1							
35 to 39 “		8	1	2	1		1				1					2	2		1					
40 to 44 “		3	3		1		2	1			1	2				3				1		1		
45 to 49 “		3	2	1	1		2	1			2					1		1	2					
50 to 54 “		3		4			2	2				1				4	1			1	2		1	
55 to 59 “			2	1	2		2	1				3				2	1			2	1			
60 to 64 “		1		1	1		2	3			1	4				1				2				
65 to 69 “		1	1	1	3							1				3	1			1				
70 to 74 “				1	1	1		1	3			2	1			1	2							
75 to 79 “		1			1			1				3				1					2			
80 to 84 “				2				1	2								1						1	
85 to 89 “					1							3												
90 to 94 “					1																			
95 and over.....																								
	28	18	36	26	1	2	19	20	2	1	9	19	13	7	18	16	...	2	8	6	...	3	3	2

AGE PERIODS AND WARDS. WARD IX.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematur y.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	2	1			3	1	20	5	3	4			15	7	1						2	
1 year.....					1	2			1				1		2							
2 to 4 years.			1	2						1			3		2							
5 to 9 “					2	1																
10 to 14 “													1		2							
15 to 19 “					1								1		1							
20 to 24 “													2	3	1	1						
25 to 29 “													2	2	2		1					
30 to 34 “					1								1	3	1	1		1				
35 to 39 “					1								3	3		1						
40 to 44 “													5	8	2		1					
45 to 49 “													4	1	1		2		1		1	
50 to 54 “													2		2		1				1	2
55 to 59 “									1				4	2		1	1					
60 to 64 “									1	1			5	1		2						
65 to 69 “										1	1		4	2		1						
70 to 74 “										1		2		1					1			
75 to 79 “													2	1	1							
80 to 84 “											1		2	2								
85 to 89 “																						
90 to 94 “													1									
95 and over...																						
	2	1	1	2	9	4	20	5	6	8	2	2	58	36	18	7	5	2	1	1	4	2

TABLE XIII. — DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.			4	2									7	3										
1 year.....				2									1										1	1
2 to 4 years....				1																		2		
5 to 9 “																						2	2	
10 to 14 “				1												1								
15 to 19 “	1																							
20 to 24 “	2	2	1	1			1																	1
25 to 29 “		4	2	1				3																
30 to 34 “	5	1	1				2			1												1		
35 to 39 “	4	1	1	1			1		1		1		1		1		1				1			
40 to 44 “	1			1			1	1									1							
45 to 49 “	2		1	1			1				1				2	1		1		1		1		1
50 to 54 “									1							2		3		2				
55 to 59 “		2	1	2			1	1				1			2	1		1	1	1				
60 to 64 “			1	1			3	2			1	4			1					1				
65 to 69 “				3			2	3			1	2			4					1				
70 to 74 “				1		1	2	2			1				1			1			1			
75 to 79 “	1					1	1	4			1	2				1						2		
80 to 84 “			1			1	1	1										1						
85 to 89 “		1																						
90 to 94. “				1				1																
95 and over.....					1																			
	16	11	13	19	1	3	16	18	2	1	6	9	8	4	10	7	...	9	1	6	1	4	6	5

AGE PERIODS AND WARDS. WARD X.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.*		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..						1	6	6	....	2	....	....	8	6	....	....	....	....	....	....	1	....
1 year.....					1	....	....	....	1	....	....	....	1	1	....	....	....	....	....	....	....	....
2 to 4 years.			1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
5 to 9 “	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 to 14 “	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 to 19 “	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..
20 to 24 “	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	1	..	..	..	..	..
25 to 29 “	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	1	..	..	..	..
30 to 34 “	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	1	1	1	..	..	..	..
35 to 39 “	..	..	..	..	..	..	..	..	..	..	..	..	2	6	1	..	..	..	..	1	..	..
40 to 44 “	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..
45 to 49 “	..	..	..	..	1	1	..	..	..	..	..	..	5	5	1	1	1	..	..	..	..	..
50 to 54 “	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	1	1	..	..	..	..	..
55 to 59 “	..	..	..	..	..	..	..	..	..	..	1	..	1	3	..	..	..	..	..	..	..	..
60 to 64 “	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	1	..	..	..	..	..
65 to 69 “	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	..	..	..	..	..	..	..
70 to 74 “	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	..	..	..	..	..	..	..
75 to 79 “	..	..	..	..	..	..	..	..	..	..	1	..	5	3	1	1	..	..	..	..	..	..
80 to 84 “	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..
85 to 89 “	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..
90 to 94 “	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
95 and over..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
			1	1	2	3	6	6	1	2	....	6	36	44	6	7	6	2	..	1	1	....

TABLE XIII. — DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuber- culosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Maras- mus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	3	3	1	...	...	...	...	...	...	...	5	2	...	...	...	...	...	...	...	...	1	...
1 year.....	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1
2 to 4 years....	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 to 9 “	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
10 to 14 “	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	...	2	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	...	3	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 to 34 “	...	1	1	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
35 to 39 “	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
40 to 44 “	...	3	1	...	2	...	1	2	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
45 to 49 “	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	4	2	...	...	...	...	...	...	...
50 to 54 “	...	2	1	1	...	...	...	1	...	...	2	...	...	...	...	1	...	1	1	...	1	...	...	...
55 to 59 “	...	1	1	1	...	1	2	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...
60 to 64 “	...	...	1	1	...	...	2	2	...	...	1	...	...	...	...	2	...	1	...	...	...	...	...	...
65 to 69 “	...	...	1	4	...	...	3	2	...	...	6	3	...	...	...	1	...	...	...	1	...	...	...	...
70 to 74 “	...	...	...	4	...	1	3	1	...	...	2	1	...	...	...	4	...	...	...	1	...	...	...	...
75 to 79 “	...	...	1	3	...	...	1	2	...	...	1	2	...	...	1	1	...	...	1	...	...	...	...	...
80 to 84 “	...	1	1	2	1	1	1	2	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...
85 to 89 “	...	...	...	...	...	1	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	6	11	11	27	2	4	17	21	1	2	13	9	7	2	2	17	...	2	4	2	2	2	2	1

AGE PERIODS AND WARDS. WARD XI.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	...	...	...	...	...	1	3	1	...	...	...	5	4	...	...	...	...	...	...	...	...
1 year.....	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
2 to 4 years.	...	...	2	1	1	...	...	...	...	...	...	...	2	1	1	...	...	...	...	...	...	...
5 to 9 “ ..	...	...	...	...	1	2	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...
10 to 14 “ ..	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
15 to 19 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...
25 to 29 “ ..	...	...	...	1	1	...	...	...	...	...	...	...	...	1	1	1	1	1	...	...	...	...
30 to 34 “ ..	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
35 to 39 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	3	1	1	...	1	...	1	...	...
40 to 44 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	1	...
45 to 49 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
50 to 54 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	3	...	1	1	...	...	...	...	1
55 to 59 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	1	3	3	1	1	...	...	...	...	...
60 to 64 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	3	1	...	...	...	...	...	...	1
65 to 69 “ ..	...	...	...	...	...	...	...	...	1	...	...	...	2	1	...	...	...	...	...	...	...	...
70 to 74 “ ..	...	...	...	...	...	...	...	...	...	1	...	...	3	2	...	...	...	...	...	...	...	...
75 to 79 “ ..	...	...	...	...	...	...	...	...	1	...	...	...	...	7	...	1	...	...	...	...	...	...
80 to 84 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
85 to 89 “ ..	...	...	...	...	...	...	...	...	...	1	...	...	1	2	...	1	...	...	...	...	...	...
90 to 94 “ ..	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
95 and over ..	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
	1	...	4	3	3	3	1	3	1	2	4	1	24	35	10	7	3	3	....	1	1	3

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.	1	3	2	2							1	6	1											
1 year.....	2	3	3												1								1	
2 to 4 years.....				1		1																	1	
5 to 9 “															1								1	1
10 to 14 “																								
15 to 19 “	1						1		1							1								
20 to 24 “	2								1															
25 to 29 “	4	3	1					2	1										1					
30 to 34 “	2		1	2					1															
35 to 39 “	4	2	2				2	1	1						1	1		1						
40 to 44 “		3	1	1			1	1			1	1			2				1			2		
45 to 49 “	2	3	2				1	2									1		1					
50 to 54 “	1	1									1	1			2	1			2					
55 to 59 “	2	2	3			1		2							1	2			1	1	1	3		
60 to 64 “	2		1	2		1	6	4			1	1			2	2			1	2	1	2		
65 to 69 “				3		2	2	1			1					1			2					
70 to 74 “	1			1			2	1		1	1	2			1	2			1			1		
75 to 79 “				3				4				2			1	2				1				
80 to 84 “				1		1		1				2				1								
85 to 89 “					1	1						1			1									
90 to 94 “																					1			
95 and over.....																								
	20	18	17	19	3	7	15	19	5	1	5	11	6	1	13	13	...	2	10	4	3	8	3	1

AGE PERIODS AND WARDS. WARD XII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	2	.....	.....	2	2	8	6	1	.....	.....	.....	8	2	.....	.....	.....	.....	.....	.....	.....	.....
1 year.....	1	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1
2 to 4 years.			1	1	1	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
5 to 9 “																						
10 to 14 “																						
15 to 19 “													2	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 to 24 “													2	4	.....	.....	.....	.....	.....	.....	.....	.....
25 to 29 “						1	.....	.....	.....	.....	.....	.....	3	3	.....	.....	1	.....	.....	.....	.....	.....
30 to 34 “						1	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	2	.....	.....	.....	.....
35 to 39 “			1	.....	.....	.....	.....	.....	.....	1	.....	.....	4	1	1	1	1	1	.....	.....	.....	.....
40 to 44 “													4	2	1	.....	1	.....	.....	.....	.....	.....
45 to 49 “													2	3	1	.....	.....	.....	1	.....	.....	.....
50 to 54 “													2	.....	.....	.....	1	.....	.....	.....	.....	.....
55 to 59 “													1	2	.....	1	.....	.....	.....	.....	.....	.....
60 to 64 “													3	2	4	1	.....	.....	.....	.....	.....	.....
65 to 69 “										1	.....	1	4	3	2	1	.....	.....	.....	.....	.....	.....
70 to 74 “													2	6	1	.....	.....	.....	.....	.....	.....	.....
75 to 79 “											1	3	2	2	.....	1	.....	.....	.....	.....	.....	.....
80 to 84 “										1	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
85 to 89 “														1	.....	.....	.....	.....	.....	.....	.....	.....
90 to 94 “												1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
95 and over...																						
	2	2	2	1	6	6	8	6	1	3	3	6	45	35	10	5	4	3	1	.....	.....	1

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	16	8	8	4	1	...	...	...	...	...	17	16	1	1	...	...	...	...	...	...	1	...
1 to 2 years.....	...	1	7	5	...	...	1	...	...	...	...	...	4	1	...	...	...	...	...	...	...	...	1	...
2 to 4 “.....	...	...	2	5	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	5	4	
5 to 9 “.....	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	
10 to 14 “.....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15 to 19 “.....	...	2	4	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
20 to 24 “.....	...	3	2	2	...	...	...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
25 to 29 “.....	...	1	2	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	
30 to 34 “.....	...	3	7	3	1	...	...	3	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	
35 to 39 “.....	...	7	4	1	4	...	...	1	...	...	...	1	...	...	...	2	...	...	2	...	...	...	...	
40 to 44 “.....	...	1	1	2	2	...	...	4	2	...	...	...	...	...	1	1	...	1	...	...	...	...	...	
45 to 49 “.....	...	4	1	2	1	...	...	2	3	...	...	...	...	...	1	...	...	...	2	...	...	...	...	
50 to 54 “.....	...	5	...	2	1	...	...	2	...	...	1	1	...	...	...	2	...	...	1	2	...	...	...	
55 to 59 “.....	...	...	...	1	1	...	...	3	1	...	...	1	...	...	...	1	...	...	1	1	...	...	...	
60 to 64 “.....	...	2	...	...	2	...	...	3	5	...	...	1	2	...	...	1	...	2	...	...	...	...	...	
65 to 69 “.....	...	...	...	1	...	...	...	2	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
70 to 74 “.....	...	...	...	2	1	...	...	3	2	...	...	...	1	...	...	1	...	...	1	1	...	...	...	
75 to 79 “.....	...	...	...	...	...	1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	
80 to 84 “.....	...	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	
85 to 89 “.....	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	
90 to 94 “.....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	28	22	42	33	8	9	28	18	1	2	4	8	22	17	6	10	...	3	8	4	...	1	9	5

AGE PERIODS AND WARDS. WARD XIII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	6	1	....	....	4	3	7	8	9	13	..	..	16	15	....	....	....	....	....	....	2	1
1 to 2 years.	1	..	....	....	2	1	....	....	1	3	....	....	....	1	....	....	....	....	....	....	....	....
2 to 4 "	..				1	1	....	....	....	....	....	....	1	2	1	1	....	....	....	....	....	....
5 to 9 "	..				1	..	....	....	1	..	....	....	1	..	2	....	....	....	....	....	....	....
10 to 14 "	..				..	2	....	....	....	....	....	....	2	1	....	....	....	....	....	....	....	....
15 to 19 "	..				..	1	....	....	....	....	....	....	....	..	1	....	....	....	....	....	....	....
20 to 24 "	..				1	..	....	....	....	....	....	....	....	1	3	..	3	....	....	....	....	....
25 to 29 "	..												2	3	3	..	....	....	....	....	....	....
30 to 34 "	..								1	..	....	....	2	2	3	..	1	....	....	....	....	....
35 to 39 "	..												3	1	2	..	1	....	....	....	....	....
40 to 44 "	..													4	1	1	....	....	1	....	....	....
45 to 49 "	..												4	..	3	..	....	....	1	....	....	....
50 to 54 "	..												1	3	2	..	....	....	1	....	....	....
55 to 59 "	..												1	2	2	..	1	....	....	....	....	....
60 to 64 "	..										1	..	1	3	1	..	....	....	....	....	....	....
65 to 69 "	..										1	..	2	3	1	..	....	....	....	....	....	....
70 to 74 "	..										..	3	....	1	....	1	....	....	....	....	..	1
75 to 79 "	..										..	2	....	1	....	....	....	....	....	....	....	....
80 to 84 "	..										..	1	....	....	....	....	....	....	....	....	....	....
85 to 89 "	..																					
90 to 94 "	..										1	..	1	..	....	....	....	....	....	....	....	....
95 and over...	..																					
	7	1	....	....	9	8	7	8	12	16	3	6	37	43	25	3	6	...	3	...	2	2

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	11	10	2	...	2	...	...	...	...	...	6	10	...	...	...	...	...	...	...	...	...	...
1 year.....	...	...	4	3	1	1	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...
2 to 4 years.....	...	...	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
5 to 9 “.....	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 to 14 “.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “.....	4	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “.....	2	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “.....	2	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
30 to 34 “.....	8	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 to 39 “.....	5	1	2	1	...	...	...	1	...	1	...	...	...	...	...	...	1	1	...	...	...	1	...	...
40 to 44 “.....	6	4	2	...	...	...	...	...	...	...	1	...	...	...	1	3	...	...	1	...	...	...	...	...
45 to 49 “.....	2	...	...	1	...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	5	...	...	...	...
50 to 54 “.....	1	2	2	...	...	...	2	2	...	...	2	3	...	...	1	1	...	...	1	...	...	...	...	...
55 to 59 “.....	...	...	2	...	...	...	3	2	...	...	1	2	...	...	2	2	...	2	...	...	1	...	...	...
60 to 64 “.....	2	...	...	2	2	...	2	2	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...
65 to 69 “.....	...	...	...	2	1	...	5	1	...	...	3	2	...	...	...	2	...	...	...	1	1	2	...	...
70 to 74 “.....	...	...	...	1	...	...	2	2	...	...	2	1	...	...	...	1	...	...	...	...	...	...	...	...
75 to 79 “.....	...	...	...	2	1	1	1	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
80 to 84 “.....	...	...	1	...	1	1	1	1	...	...	1	2	...	...	...	...	...	...	...	1	...	...	...	...
85 to 89 “.....	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...
90 to 94 “.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	32	10	27	26	8	3	21	18	2	1	13	16	7	12	4	9	...	3	2	10	2	3	2	2

AGE PERIODS AND WARDS. WARD XIV.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	3	2	....	...	1	1	5	3	4	4	....	...	15	10	....	...	....	....	....	....	....	3
1 year.....		...	1	...	2	4	....	...	1	1	....	...	2	...	....	1	....	....	....	....	....	...
2 to 4 years		...	3	4	1	1	....	...	....	...	....	...	3	...	1	....	....	....	....	....	1	...
5 to 9 “		...	1	....	....	...	....	...	....	...	....	...	2	....	....	....	....	....	....	....	....	...
10 to 14 “		...		...	1	....	....	...	....	...	....	...	....	...	2	....	....	....	....	....	....	...
15 to 19 “		...		...		...		...		...		...	1	2	....	....	....	....	....	....	....	...
20 to 24 “		...		...		...		...		...		...	1	...	2	...	1	....	....	....	....	...
25 to 29 “		...		...		...		...		...		...	2	1	2	....	....	....	....	....	....	...
30 to 34 “		...		...		...		...		...		...		1	....	....	....	....	....	....	....	...
35 to 39 “		...		...		...		...		...		...	1	3	2	....	....	....	....	....	....	...
40 to 44 “		...		...	1	....	....	...	....	...	....	...	4	4	....	....	....	....	....	....	....	...
45 to 49 “		...		...		...		...		...		...	3	6	2	....	....	1	....	....	....	...
50 to 54 “		...		...		...		...		...		...	3	4	1	....	....	....	....	....	....	...
55 to 59 “		...		...		...		...		...		...	2	1	....	1	....	....	....	....	....	...
60 to 64 “		...		...		...		...		...		1	2	2	....	....	....	....	....	....	....	...
65 to 69 “		...		...		...		...		...		1	3	2	....	....	....	....	....	....	....	...
70 to 74 “		...		...		...		...	1	1	....	...	1	....	1	1	....	....	....	....	....	...
75 to 79 “		...		...		...		...		...		...		...								...
80 to 84 “		...		...		...		...	1	....	....	...	....	3	....	....	....	....	....	....	....	...
85 to 89 “		...		...		...		...		...		...		1	....	....	....	....	....	....	....	...
90 to 94 “		...		...		...		...		...		...										...
95 and over...		...		...		...		...		...		...										...
	3	2	5	4	6	6	5	3	7	6	....	2	45	40	13	3	1	1	....	....	1	3

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	1	4	5	1	...	2	...	...	...	...	...	15	10	...	...	...	...	...	...	...	...	...	...
1 year	...	...	5	2	1	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1
2 to 4 years	1	...	1	4	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	...
5 to 9 “	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
10 to 14 “	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
15 to 19 “	...	3	2	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	...	3	5	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
25 to 29 “	...	3	4	2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 to 34 “	...	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 to 39 “	...	4	3	...	1	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
40 to 44 “	...	5	3	1	...	...	...	3	...	...	1	1	...	...	...	1	...	...	1	...	...	...	...	...
45 to 49 “	...	2	2	5	...	...	...	1	1	1	...	...	...	...	...	...	3	...	1	...	1	...	...	...
50 to 54 “	...	...	1	1	...	1	...	2	...	...	1	2	...	...	...	2	...	...	...	1	...	...	...	...
55 to 59 “	...	1	...	...	...	1	3	1	...	...	...	3	...	...	...	...	...	...	...	3	...	...	...	...
60 to 64 “	...	1	...	1	...	...	2	2	...	...	2	2	...	...	...	1	...	...	...	...	...	...	...	...
65 to 69 “	...	...	2	...	1	...	...	4	...	...	3	4	...	...	1	4	...	...	...	1	...	1	...	...
70 to 74 “	...	...	...	1	2	...	1	1	3	...	...	1	...	...	...	2	...	...	1	...	...	...	...	...
75 to 79 “	...	...	...	...	2	...	...	1	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...
80 to 84 “	...	...	...	...	2	...	...	3	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
85 to 89 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	25	25	23	21	3	4	20	16	2	1	8	15	17	12	2	12	...	3	2	7	...	2	3	1

AGE PERIODS AND WARDS. WARD XV.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	3	....	....	....	2	4	5	3	8	....	....	17	12	....	....	....	....	....	....	....	....
1 year					3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2 to 4 years.	..	..		1	1	1	....	....	....	....	....	....	2	1	....	....	....	....	....	....	....	....
5 to 9 "	..		1	2	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
10 to 14 "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	....	....	....	....	....	....
15 to 19 "	..					1	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....
20 to 24 "	..				1	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....
25 to 29 "	..												1	....	2	....	....	....	....	....	....	....
30 to 34 "	..													2	....	....	1	....	....	....	....	....
35 to 39 "	..												1	4	1	1	....	....	....	....	....	....
40 to 44 "	..												2	3	....	....	....	....	....	....	....	....
45 to 49 "	..					1	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....
50 to 54 "	..				1	....	....	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....
55 to 59 "	..												3	3	1	2	....	....	....	....	....	....
60 to 64 "	..												1	3	1	....	....	....	....	....	....	....
65 to 69 "	..									2	....	....	2	1	1	....	....	....	....	....	....	....
70 to 74 "	..	..							1	....	....	....	1	1	....	1	....	....	....	....	....	....
75 to 79 "	..										1	1	1	2	....	....	....	....	....	....	....	....
80 to 84 "	..												1	1	....	....	....	....	....	....	....	....
85 to 89 "	..													1	....	....	....	....	....	....	....	....
90 to 94 "	..																					
95 and over...																						
	1	3	1	3	7	5	4	5	4	10	1	1	37	36	7	5	2	....	....	....	1	....

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	...	...	7	3	1	...	1	...	...	...	1	...	9	8	...	1	...	...	...	...	...	...	...	1
1 year.....	...	...	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
2 to 4 years	...	...	3	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
5 to 9 “	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
10 to 14 “	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	1	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	1	1	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	3	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 to 34 “	4	1	2	1	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
35 to 39 “	3	1	1	1	...	...	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
40 to 44 “	3	...	2	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...
45 to 49 “	1	...	3	...	...	1	2	3	1	...	...	1	...	...	2	1	...	1	...	...	...	...	...	...
50 to 54 “	1	...	2	1	...	...	1	...	...	...	1	1	...	...	2	...	...	...	1	...	...	...	...	...
55 to 59 “	2	2	3	1	...	...	1	2	...	...	3	1	...	...	2	...	...	...	2	1	...	...	...	...
60 to 64 “	2	...	...	2	...	...	2	2	...	...	2	...	...	...	2	1	...	...	...	1	...	1	...	...
65 to 69 “	1	...	1	...	...	1	2	1	...	...	2	...	...	...	2	1	...	...	1	1	...	...	...	...
70 to 74 “	...	...	1	...	...	...	3	7	...	...	...	...	...	...	4	...	...	...	1	1	...	...	...	...
75 to 79 “	...	...	...	...	1	1	...	1	...	...	...	1	...	...	...	...	1	1	1	...	...	...	...	...
80 to 84 “	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	23	6	29	17	3	4	17	23	2	1	9	5	9	9	14	9	...	2	4	8	1	2	2	2

AGE PERIODS AND WARDS. WARD XVI.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..		4	....	....	1	....	5	7	3	3	....	....	6	6	1	1	....	....	....	....	1	....
1 year.....	1	1	....	....	....	1	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....
2 to 4 years.						2	....	....	....	....	....	....	3	5	3	....	....	....	....	....	....	....
5 to 9 “	..													1	....	....	....	....	....	....	....	....
10 to 14 “	..																					
15 to 19 “	..													1	....	....	....	....	....	....	....	....
20 to 24 “	..			1	1	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....
25 to 29 “	..													2	....	....	....	....	....	....	....	....
30 to 34 “	..													1	....	....	....	....	....	....	....	....
35 to 39 “	..												1	2	....	....	1	....	....	....	....	....
40 to 44 “	..												1	3	1	1	....	....	....	....	1	....
45 to 49 “	..												1	3	2	....	....	....	....	....	....	....
50 to 54 “	..				1	....	....	....	....	....	....	....	4	5	....	....	....	....	....	....	1	1
55 to 59 “	..												1	1	....	....	....	....	....	....	....	....
60 to 64 “	..												1	2	....	1	....	....	....	....	....	....
65 to 69 “	..												2	....	....	....	....	....	....	....	....	....
70 to 74 “	..									1	1	....	2	6	1	....	....	....	....	....	....	....
75 to 79 “	..										1	....	1	2	....	....	....	....	....	....	....	....
80 to 84 “	..									1	3	2	2	2	....	2	....	....	....	....	....	....
85 to 89 “	..											1	....	2	....	....	....	....	....	....	....	....
90 to 94 “	..											1	....	....	....	....	....	....	....	....	....	....
95 and over...																						
	1	5	....	1	3	3	5	7	3	5	5	4	27	45	9	5	1	....	....	....	3	1

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	8	8	1	3	1	2	...	...	...	2	13	12	...	...	...	...	...	...	...	...	...	...
1 year	1	1	4	8	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
2 to 4 years....	...	1	3	5	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	
5 to 9 “	...	1	1	1	...	...	...	1	...	...	...	...	...	...	1	1	...	...	...	...	...	1	1	
10 to 14 “	...	1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
15 to 19 “	...	2	3	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
20 to 24 “	...	5	5	1	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
25 to 29 “	...	4	6	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	
30 to 34 “	...	5	7	3	1	...	...	2	4	...	1	...	...	...	1	...	...	...	...	...	...	...	1	
35 to 39 “	...	4	4	1	2	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...	1	...	...	
40 to 44 “	...	1	5	2	1	...	...	2	1	...	...	...	...	...	1	1	...	1	1	...	1	...	...	
45 to 49 “	...	3	2	2	1	...	1	...	1	...	2	1	...	...	1	1	...	...	...	...	...	...	...	
50 to 54 “	...	2	1	3	...	...	...	5	3	...	1	...	...	...	...	...	...	...	1	...	1	...	...	
55 to 59 “	...	4	1	1	1	...	...	4	...	...	1	2	...	...	...	1	...	...	1	1	...	1	...	
60 to 64 “	...	2	...	3	2	1	...	...	3	...	1	2	...	...	1	...	...	...	2	2	...	...	1	
65 to 69 “	...	1	1	3	...	1	1	7	1	...	1	3	...	...	...	2	...	...	1	...	1	...	...	
70 to 74 “	...	...	...	...	...	3	3	...	...	...	2	2	...	...	1	2	...	...	...	1	...	...	...	
75 to 79 “	...	...	1	2	...	...	1	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	
80 to 84 “	...	...	...	1	...	...	1	...	...	...	...	2	...	...	...	1	...	...	...	...	1	...	...	
85 to 89 “	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	1	...	...	...	...	
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	34	39	37	37	3	9	27	22	1	1	8	18	13	13	9	10	...	2	5	6	1	5	3	8

AGE PERIODS AND WARDS. WARD XVII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	.	F.	M.	F.	M.	F.
Under 1 year..	3	1		...	2	...	10	5	11	5		...	14	14		1		...		...	1	...
1 year.....	1	...		...	3	1		...	1	1		...	2	1	1	...		...		...	1	1
2 to 4 years.		...		...	4	1	....	...	1	1	....	...	....	...	1	....	...	....	...	....	...	
5 to 9 “ ..		...	1	...	1	1	....	...	....	...	....	...	1	1	....	...	....	...	....	...	....	
10 to 14 “ ..		...		...		...		...		...		...	1	1	....	...	....	...	....	...	....	
15 to 19 “ ..		...		...		...		...		...		...	3	1	....	...	....	...	....	...	....	
20 to 24 “ ..		...		...		...		...		...		...	2	1	....	...	1	....	...	....	...	
25 to 29 “ ..		...		...		1	....	...	....	...	....	...	2	2	....	...	1	....	...	....	...	
30 to 34 “ ..		...		...		1	....	...	....	...	....	...	3	6	1	....	....	...	....	...	....	
35 to 39 “ ..		...		...	1	....	...	....	...	....	...	....	3	2	1	....	1	....	...	....	...	
40 to 44 “ ..		...		...		1	....	...	....	...	....	...	1	3	4	....	1	....	1	....	...	
45 to 49 “ ..		...		...		...		...		1	....	...	5	3	1	....	....	...	....	...	....	
50 to 54 “ ..		...		...		...		...		...		...	3	1	....	...	1	....	...	....	...	
55 to 59 “ ..		...		...		...		...		...		...	2	1	....	1	....	...	....	1	...	
60 to 64 “ ..		...		...		...		...		...		...	5	2	....	...	....	...	....	...	....	
65 to 69 “ ..		...		...		...		...		...	1	....	2	1	....	1	....	...	....	...	....	
70 to 74 “ ..		...		...		...		...		...		...	2	1	....	...	....	...	....	1	...	
75 to 79 “ ..		...		...		...		...		...		1	....	...	....	...	....	...	....	...	....	
80 to 84 “ ..		...		...		...		...		...	2	2	....	4	....	...	....	...	....	...	....	
85 to 89 “ ..		...		...		...		...		1	....	2	....	1	....	...	....	...	....	...	....	
90 to 94 “ ..		...		...		...		...		...		...		...		...		...		...		
95 and over...		...		...		...		...		...		...		...		...		...		...		
	4	1	1	...	11	6	10	5	13	9	3	5	48	48	9	4	4	1		1	4	1

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	1	2	7	10	3	3	1	2	...	...	...	...	11	5	...	...	...	...	...	...	...	...	...	...
1 year.....	1	1	7	8	1	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	
2 to 4 years.....	1	...	2	2	...	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	
5 to 9 “	3	...	1	3	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	
10 to 14 “	3	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15 to 19 “	...	2	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20 to 24 “	4	2	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
25 to 29 “	2	1	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
30 to 34 “	2	2	1	...	...	...	1	2	...	...	...	...	...	...	1	1	...	...	...	...	...	2	...	
35 to 39 “	4	4	2	...	...	...	2	2	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	
40 to 44 “	1	4	...	3	...	...	2	1	2	...	1	...	...	...	...	2	...	1	1	2	...	...	...	
45 to 49 “	7	3	...	1	...	...	1	4	...	...	...	...	...	...	...	...	2	1	2	...	...	...	...	
50 to 54 “	2	2	1	...	...	...	5	1	...	...	2	...	...	...	1	4	...	...	...	...	...	...	...	
55 to 59 “	3	...	...	...	...	...	4	...	...	...	2	...	...	...	1	1	...	...	1	...	...	...	...	
60 to 64 “	1	1	2	...	...	2	1	4	...	...	2	2	...	...	...	1	...	...	...	...	...	...	...	
65 to 69 “	...	...	...	4	1	...	2	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	
70 to 74 “	1	...	...	2	...	...	4	1	...	...	1	4	...	...	...	1	...	...	1	...	...	...	...	
75 to 79 “	...	...	...	...	1	...	2	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	
80 to 84 “	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
85 to 89 “	...	...	...	1	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	36	24	24	37	6	9	30	22	3	...	10	10	13	8	6	10	...	3	4	5	...	...	4	2

AGE PERIODS AND WARDS. WARD XVIII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	6	3	...	...	2	2	10	7	4	6	...	...	23	13	...	2	...	...	...	...	...	2
1 year.....	1	...	...	...	2	1	...	...	...	1	...	...	2	1	...	...	...	...	...	...	...	...
2 to 4 years.	...	...	2	...	2	3	...	...	...	...	...	...	1	2	1	...	...	...	...	...	...	...
5 to 9 "	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
10 to 14 "	...	...	...	...	1	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
15 to 19 "	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
20 to 24 "	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
25 to 29 "	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	1	...	...	...	...	...
30 to 34 "	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	...	...	...	...
35 to 39 "	...	...	...	...	...	...	...	...	...	...	...	...	4	2	2	...	...	...	...	...	...	...
40 to 44 "	...	...	...	...	2	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
45 to 49 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
50 to 54 "	...	...	...	...	...	...	...	...	...	...	...	...	1	3	2	...	...	...	...	...	1	...
55 to 59 "	...	...	...	...	...	...	...	...	...	...	...	...	4	2	1	...	...	...	...	...	...	...
60 to 64 "	...	...	...	...	...	...	...	...	1	...	1	2	2	...	1	...	...	...	...	...	...	...
65 to 69 "	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...
70 to 74 "	...	...	...	...	...	...	...	1	1	2	...	1	2	...	...	...	...	...	...	...	...	...
75 to 79 "	...	...	...	...	...	...	...	...	...	2	...	1	1	1	...	1	...	...	...	...	...	...
80 to 84 "	...	...	...	...	...	...	...	...	...	2	...	...	1	1	...	...	...	...	...	1	...	...
85 to 89 "	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...
90 to 94 "	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...
95 and over...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	7	3	2	...	10	6	10	7	5	9	7	3	48	36	13	6	2	...	...	...	2	2

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	6	9	...	1	2	1	...	...	...	...	7	11	...	1	...	...	...	...	...	...	1	...
1 year.....	...	...	3	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 to 4 years.....	...	...	...	1	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	5	1
5 to 9 “.....	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	2	
10 to 14 “.....	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
15 to 19 “.....	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “.....	...	1	5	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “.....	...	1	6	1	...	...	3	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
30 to 34 “.....	...	3	8	4	1	...	2	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...
35 to 39 “.....	...	7	1	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
40 to 44 “.....	...	5	1	3	...	...	1	...	...	1	...	...	...	...	...	...	...	2	1	...	...	...	...	...
45 to 49 “.....	...	...	2	4	...	1	1	3	...	...	1	4	...	...	1	1	...	1	...	1	...	...	...	...
50 to 54 “.....	...	4	1	2	...	1	4	5	...	...	2	...	...	...	2	...	...	1	1	...	1	...	...	...
55 to 59 “.....	...	...	2	1	3	...	2	5	1	...	...	4	2	...	1	1	...	...	2	...	2	...	...	...
60 to 64 “.....	...	...	1	2	1	1	2	5	2	...	3	2	...	...	2	2	...	1	1	...	...	...	...	...
65 to 69 “.....	...	...	2	5	3	1	2	1	...	...	...	2	...	...	2	...	...	1	2	...	...	...	...	...
70 to 74 “.....	...	...	...	1	...	...	1	1	...	...	...	3	...	...	...	1	...	...	1	...	...	1	...	...
75 to 79 “.....	...	...	...	1	3	...	2	1	...	...	1	2	...	...	...	...	...	1	1	...	...	...	...	...
80 to 84 “.....	...	...	1	...	1	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “.....	...	...	...	1	1	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	22	31	40	28	5	6	28	23	3	3	5	21	9	11	8	11	...	2	5	9	1	4	9	4

AGE PERIODS AND WARDS. WARD XIX.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..		3	....	....	7	5	12	4	3	8	....	....	13	7	....	....	....	....	....	....	1	1
1 year.....				1	1	2	....	....	1	....	....	....	5	1	....	1	....	....	....	....	....	....
2 to 4 years.				1	1	4	....	....	....	....	....	....	3	5	....	....	....	....	....	....	....	....
5 to 9 “			2	....	1	....	....	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....
10 to 14 “														1	....	2	....	....	....	....	....	....
15 to 19 “					1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
20 to 24 “													2	....	....	....	1	....	....	....	....	....
25 to 29 “						1	....	....	....	....	....	....	1	3	....	1	....	....	....	....	....	....
30 to 34 “													1	2	....	....	....	....	....	1	....	....
35 to 39 “					1	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....
40 to 44 “													4	5	2	1	....	....	....	....	....	....
45 to 49 “													2	1	1	....	1	....	....	....	....	....
50 to 54 “													2	4	....	2	....	....	....	....	....	....
55 to 59 “										1	....	....	....	2	....	....	....	....	....	....	....	....
60 to 64 “													4	6	1	....	1	....	....	....	....	....
65 to 69 “										1	....	1	2	3	....	....	....	....	....	....	....	1
70 to 74 “										3	....	1	2	3	....	....	....	....	....	....	....	....
75 to 79 “												3	....	1	....	1	....	....	....	....	....	....
80 to 84 “										2	1	1	1	3	....	....	....	....	....	....	....	....
85 to 89 “														1	....	....	....	....	....	....	....	....
90 to 94 “																						
95 and over...																						
		3	2	2	12	12	12	4	4	15	1	6	46	48	7	8	....	3	....	....	2	2

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	1	...	6	5	...	1	2	2	...	...	...	...	18	9	...	...	...	...	...	...	...	...	1	...
1 year.....	...	...	2	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
2 to 4 years....	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	1
5 to 9 “	1	1	...	4	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
10 to 14 “	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
15 to 19 “	...	...	5	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	2	2	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
25 to 29 “	4	4	3	4	...	...	2	1	1	2	...	...	...	...	...	2	...	...	...	1	...	...	...	1
30 to 34 “	4	1	1	...	...	...	1	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...
35 to 39 “	3	1	1	1	...	...	...	2	...	...	...	1	...	...	...	2	...	...	...	1	...	...	...	...
40 to 44 “	...	5	1	...	...	...	2	4	...	...	1	...	...	...	3	1	...	3	...	1	...	...	...	...
45 to 49 “	...	2	1	...	...	...	2	4	...	...	1	...	...	...	1	1	...	1	...	1	...	...	...	...
50 to 54 “	2	3	2	4	...	1	2	1	...	...	...	3	...	...	1	4	...	1	2	1	...	1	...	...
55 to 59 “	1	...	...	4	...	1	4	2	...	...	3	4	...	...	7	1	...	...	1	1	1	...	...	...
60 to 64 “	...	...	1	2	...	1	3	5	...	...	7	3	1	...	3	1	...	1	2	1	...	...	...	...
65 to 69 “	...	...	1	2	...	...	5	2	...	...	7	...	1	...	1	2	...	2	2	1	...	1	...	...
70 to 74 “	...	...	2	5	...	1	2	4	...	...	1	1	...	...	...	2	...	...	1	3	...	2	...	...
75 to 79 “	...	...	1	...	...	1	7	4	...	...	2	5	...	...	2	...	...	...	1	...	...	2	...	...
80 to 84 “	...	...	1	...	...	2	3	2	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	1	...	4	...	...	1	3	...	...	...	1	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	1	...	...	2	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	18	25	24	36	1	9	39	39	1	4	25	24	20	9	20	19	...	8	9	11	1	6	7	2

AGE PERIODS AND WARDS. WARD XX.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	3	...	1	...	...	...	11	9	2	2	...	...	14	12	1	...	...	...	...	...	...	...
1 year.....	1	...	1	...	2	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
2 to 4 years.	...	...	1	...	2	1	...	...	1	...	...	...	2	1	1	...	...	...	...	...	...	...
5 to 9 “ ..	...	...	...	1	1	...	...	...	...	...	...	...	3	...	1	...	...	...	...	...	...	...
10 to 14 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
15 to 19 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	4	...	...	1	...	...	...	...	...
20 to 24 “ ..	...	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
25 to 29 “ ..	...	...	1	...	...	1	...	...	...	...	...	...	2	8	...	...	...	...	...	...	...	...
30 to 34 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	1	...	...	...	...	...
35 to 39 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	6	7	...	...	2	...	...	...	1	...
40 to 44 “ ..	...	...	...	...	...	1	...	...	...	...	...	...	4	3	1	...	...	...	...	...	...	...
45 to 49 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	5	2	1	1	1	...	...	...	...	...
50 to 54 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	2	1	...	...	...	...	...	...	...
55 to 59 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	6	4	1	1	...	...	...	...	...
60 to 64 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	1	...	...	...	...	...
65 to 69 “ ..	...	...	...	...	...	...	...	...	...	...	2	2	6	...	...	...	...	...	...	...	...	...
70 to 74 “ ..	...	...	...	...	...	...	...	...	...	...	1	...	6	3	...	...	...	...	...	...	...	...
75 to 79 “ ..	...	...	...	...	...	...	...	...	...	2	...	...	5	3	...	...	...	...	...	...	...	...
80 to 84 “ ..	...	...	...	...	...	...	...	...	...	1	3	2	3	2	...	2	...	...	...	...	...	...
85 to 89 “ ..	...	...	...	...	...	...	...	...	...	1	3	1	2	3	...	...	...	...	...	...	...	...
90 to 94 “ ..	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...
95 and over...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	4	...	4	1	6	5	11	9	3	8	8	6	61	69	12	5	8	...	...	...	2	...

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital.)		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	...	...	2	5	1	1	1	2	...	...	...	...	6	4	...	...	...	...	...	...	...	...	...	...
1 year	...	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 to 4 years	...	...	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
5 to 9 “	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
10 to 14 “ ...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	...	4	2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	...	3	1	2	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
30 to 34 “	...	2	3	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
35 to 39 “	...	1	...	1	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
40 to 44 “	...	1	...	1	...	...	1	1	...	...	...	2	...	...	...	1	...	...	...	...	1	1	...	...
45 to 49 “	...	2	...	1	2	...	2	1	...	...	1	2	...	...	1	1	...	3	...	2	...	...	...	...
50 to 54 “	...	2	1	...	2	...	4	4	1	...	...	3	...	...	...	2	...	...	...	...	1	...	...	...
55 to 59 “	...	...	...	2	...	...	5	3	...	...	6	2	...	...	3	1	...	...	3	...	1	...	...	...
60 to 64 “	...	1	1	4	4	...	6	1	...	...	...	2	1	1	...	...	1	...	1	...	...	...	...	...
65 to 69 “	...	2	...	1	2	1	8	6	...	...	3	2	...	...	1	1	...	1	1	2	...	2	...	...
70 to 74 “	...	...	1	1	1	1	5	1	...	...	4	4	...	...	...	1	...	...	3	...	...	1	...	1
75 to 79 “	...	...	...	4	2	1	...	1	...	...	3	3	...	...	1	1	...	...	...	1	...	...	...	...
80 to 84 “	...	...	...	2	...	...	3	3	...	...	5	1	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	1	...	...	6	...	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...
90 to 94 “	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	18	11	25	29	3	3	38	32	2	...	24	21	7	5	9	9	...	2	7	7	2	8	5	1

AGE PERIODS AND WARDS. WARD XXI.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	2	2	....	....	1	3	11	3	4	4	....	....	13	5	....	....	....	....	....	....	1	1
1 year.....					3	....	....	....	1	....	....	....	3	1	....	....	....	....	....	....	....	....
2 to 4 years.														1	....	....	....	....	....	....	....	....
5 to 9 “ ..														1	....	1	....	....	....	....	....	....
10 to 14 “ ..															1	....	....	....	....	....	....	....
15 to 19 “ ..													1	1	....	....	....	....	....	....	....	....
20 to 24 “ ..													1	1	1	....	....	....	....	....	....	....
25 to 29 “ ..													2	3	....	....	1	....	1	....	....	....
30 to 34 “ ..													2	1	....	....	....	1	....	....	....	....
35 to 39 “ ..														3	....	1	....	....	....	....	....	....
40 to 44 “ ..														2	....	....	....	....	....	1	....	....
45 to 49 “ ..													2	5	2	....	....	....	....	....	....	....
50 to 54 “ ..													1	....	....	....	....	1	....	....	....	....
55 to 59 “ ..													7	2	1	....	1	....	....	....	....	....
60 to 64 “ ..														3	1	....	....	1	....	....	....	....
65 to 69 “ ..									1	....	1	1	1	3	2	1	....	....	....	....	....	....
70 to 74 “ ..													2	4	2	....	....	....	....	....	....	....
75 to 79 “ ..											2	1	5	4	....	....	....	....	....	....	....	....
80 to 84 “ ..									1	....	3	2	....	2	....	....	1	....	....	....	....	....
85 to 89 “ ..											4	3	1	2	....	....	....	....	....	....	....	....
90 to 94 “ ..												1	....	....	....	....	....	....	....	....	....	....
95 and over...												1	....	....	....	....	....	....	....	....	....	....
	2	2	....	....	4	3	11	3	6	5	10	9	41	44	10	3	3	3	1	....	2	1

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	7	4	1	1	3	4	...	...	...	...	9	8	...	...	...	...	...	...	...	...	1	...
1 year.....	...	3	4	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
2 to 4 years....	1	...	3	4	...	...	...	...	1	1	...	1	1	...	1	...	...	...	...	...	...	3	2	
5 to 9 “	...	...	...	1	...	...	3	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	2	
10 to 14 “	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
15 to 19 “	...	2	1	1	...	...	1	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	...	6	...	1	1	...	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
25 to 29 “	...	2	3	1	1	...	...	1	...	3	...	...	...	...	1	...	...	...	...	...	...	...	1	...
30 to 34 “	...	3	1	...	...	...	1	2	1	2	...	...	...	...	1	2	...	...	...	...	...	...	...	...
35 to 39 “	...	5	2	...	...	...	1	1	1	2	...	...	...	...	...	...	1	...	1	...	...	...	...	...
40 to 44 “	...	3	1	2	2	...	1	2	1	1	1	...	...	...	1	1	...	...	2	...	...	...	...	...
45 to 49 “	...	2	2	2	...	2	2	1	2	...	1	1	...	...	1	...	...	...	...	...	1	...	...	...
50 to 54 “	...	...	3	...	...	...	2	4	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
55 to 59 “	...	2	3	2	1	...	4	2	...	1	2	...	...	...	...	...	1	1	2	...	1	...	...	...
60 to 64 “	...	...	1	...	2	...	3	6	...	...	2	...	...	...	1	1	...	...	2	2	3	1	...	...
65 to 69 “	...	...	...	3	2	...	1	3	3	...	1	1	...	...	...	1	...	...	1	4	1	...	...	...
70 to 74 “	...	1	...	...	...	...	2	...	...	5	1	...	...	2	1	...	...	2	1	...	...	...	...	...
75 to 79 “	...	...	...	2	3	1	...	1	1	...	2	...	...	...	1	...	...	2	1	...	...	...	...	...
80 to 84 “	...	...	...	...	2	...	1	1	3	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
85 to 89 “	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	27	20	28	26	3	6	28	35	10	14	14	4	10	8	9	7	...	3	9	14	4	4	7	7

AGE PERIODS AND WARDS. WARD XXII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	1	....	....	4	2	10	5	2	4	....	....	15	12	....	....	....	....	....	....	....	....
1 year.....					2	2	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....
2 to 4 years.			1	....	1	1	....	....	2	....	....	....	....	....	2	....	....	....	....	....	....	....
5 to 9 “					1	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....
10 to 14 “			1	....	....	2	....	....	....	....	....	....	....	3	1	....	....	....	....	....	....	....
15 to 19 “					1	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....
20 to 24 “													1	2	....	....	....	....	....	....	1	....
25 to 29 “														1	1	....	....	....	....	....	....	....
30 to 34 “					1	....	....	....	1	....	....	....	....	2	....	....	1	....	2	....	....	....
35 to 39 “													2	....	....	....	....	....	....	....	....	....
40 to 44 “													3	4	1	....	....	....	....	....	....	....
45 to 49 “													1	4	1	....	....	....	....	....	....	....
50 to 54 “						1	....	....	....	....	....	....	6	....	....	....	1	....	....	....	....	....
55 to 59 “													3	4	3	....	....	....	....	....	....	....
60 to 64 “													3	4	....	1	....	....	....	....	....	....
65 to 69 “						1	....	....	....	....	....	....	3	2	1	....	....	....	....	....	....	....
70 to 74 “											1	....	2	1	....	....	....	....	....	....	....	....
75 to 79 “											1	....	4	3	....	1	....	....	....	....	....	....
80 to 84 “											1	....	....	1	....	....	....	....	....	....	....	....
85 to 89 “											1	....	....	2	....	....	....	....	....	....	....	....
90 to 94 “														1	....	....	....	....	....	....	....	....
95 and over...																						
	1	1	2	....	10	9	10	5	5	4	1	3	44	50	10	3	2	....	2	....	1	....

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.	...	...	3	3	3	...	2	...	...	...	...	...	6	7	...	...	...	...	...	...	...	1	...	
1 year.....	1	...	...	4	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
2 to 4 years....	3	...	2	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
5 to 9 “	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
10 to 14 “	1	...	...	...	...	...	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
15 to 19 “	1	3	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
20 to 24 “	2	2	1	...	...	...	...	1	6	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
25 to 29 “	3	5	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
30 to 34 “	2	6	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
35 to 39 “	3	4	...	1	...	...	...	1	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	
40 to 44 “	1	3	1	1	...	...	...	2	1	...	1	...	...	...	...	1	...	...	2	...	...	...	...	
45 to 49 “	...	2	...	1	...	...	...	2	1	1	1	...	...	...	...	2	...	...	...	...	...	1	...	
50 to 54 “	2	...	2	...	...	...	...	...	1	...	...	...	1	...	...	4	...	...	...	2	...	...	...	
55 to 59 “	2	...	...	1	...	...	...	1	2	...	...	...	1	...	...	2	1	...	...	2	2	...	...	
60 to 64 “	2	...	1	3	...	1	3	2	...	...	2	...	...	...	...	2	...	2	1	2	1	...	...	
65 to 69 “	...	...	...	2	...	...	...	2	...	...	...	2	3	...	...	2	1	...	...	4	1	...	...	
70 to 74 “	...	...	1	3	...	...	...	2	3	...	...	...	2	...	...	3	...	...	...	...	...	...	...	
75 to 79 “	...	1	4	2	1	...	4	1	...	...	2	3	...	...	1	2	...	...	3	1	1	...	...	
80 to 84 “	...	...	...	2	...	...	...	5	...	...	3	1	...	...	1	...	...	...	...	...	...	...	...	
85 to 89 “	...	...	...	1	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	
90 to 94 “	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	23	26	16	28	5	1	22	23	15	4	10	12	6	8	11	13	...	3	8	11	3	1	3	1

AGE PERIODS AND WARDS. WARD XXIII.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	2	1	....	...	3	...	7	5	3	1	...	...	9	9	1	...	...	...	...	...	...	...
1 year.....	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...
2 to 4 years.	...	...	...	...	2	3	...	...	...	1	...	...	4	1	...	...	...	...	...	...	...	...
5 to 9 “	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
10 to 14 “	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
15 to 19 “	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	1	...	...	...	...	...	...
20 to 24 “	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...
25 to 29 “	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
30 to 34 “	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	...	...	...
35 to 39 “	...	...	...	...	1	...	...	...	...	...	...	...	4	4	2	...	...	...	...	...	...	...
40 to 44 “	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...
45 to 49 “	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...
50 to 54 “	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	1	...	...	...	...
55 to 59 “	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...
60 to 64 “	...	...	...	...	...	...	...	...	...	...	...	...	3	8	...	1	...	...	...	...	...	...
65 to 69 “	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	1	...	...	...	...	...	...
70 to 74 “	...	...	...	...	...	...	...	...	...	...	1	...	4	1	...	...	...	...	...	...	...	...
75 to 79 “	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...
80 to 84 “	...	...	...	...	...	...	...	...	...	...	1	2	1	2	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	...	...	...	...	...	1	2	...	2	...	...	1	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
95 and over..	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
	2	1	1	...	8	3	7	5	4	3	2	6	37	40	7	6	4	...	1	...	...	...

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	...	...	5	3	2	1	7	2	...	...	1	...	10	8	...	...	...	...	...	...	...	...	2	...
1 year.....	...	1	...	4	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
2 to 4 years.....	...	...	6	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
5 to 9 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	
10 to 14 “	...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
15 to 19 “	...	2	2	...	...	...	1	1	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	
20 to 24 “	...	4	2	2	1	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	1	...
25 to 29 “	...	4	4	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
30 to 34 “	...	3	1	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...
35 to 39 “	...	2	2	...	...	...	...	1	1	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...
40 to 44 “	...	2	1	1	...	...	...	3	...	...	1	1	...	...	1	1	...	...	...	...	1	...	...	...
45 to 49 “	...	1	1	1	...	...	2	2	...	...	1	...	...	1	...	1	...	...	1	...	...	...	...	...
50 to 54 “	...	1	...	2	...	1	3	4	...	...	1	2	...	...	...	...	1	...	1	...	...	...	...	...
55 to 59 “	...	1	...	...	...	...	3	2	...	...	1	1	...	1	...	1	...	...	2	2	...	1	...	...
60 to 64 “	...	...	1	1	...	...	1	4	...	...	1	1	...	...	2	2	...	...	3	...	...	...	...	...
65 to 69 “	...	...	2	1	...	...	5	5	...	...	2	...	...	...	...	3	...	...	2	...	...	1	...	...
70 to 74 “	...	...	2	...	1	2	2	1	...	...	3	6	...	...	...	4	...	...	3	...	...	1	...	...
75 to 79 “	...	...	1	2	...	...	1	1	...	...	4	2	...	...	2	1	...	1	...	...	...	1	...	...
80 to 84 “	...	...	...	1	...	1	1	2	...	...	1	2	...	...	...	...	...	...	1	...	...	1	...	...
85 to 89 “	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	19	15	23	17	4	5	27	36	3	...	15	16	11	10	7	19	...	2	8	8	...	6	5	4

AGE PERIODS AND WARDS. WARD XXIV.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	3	1	...	...	3	1	12	5	5	2	...	...	13	12	2	...	...	...	...	...	1	1
1 year.....	1	...	...	1	...	2	...	...	...	...	...	...	2	1	1	...	...	...	...	...	...	...
2 to 4 years.	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 to 9 “ ..	...	...	...	1	1	...	...	...	...	...	...	...	1	1	1	...	...	...	...	1	...	...
10 to 14 “ ..	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...
15 to 19 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “ ..	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	2	1	...	...	...	...	...
25 to 29 “ ..	...	...	...	...	...	...	...	...	1	...	...	...	1	3	1	1	...	...	...	...	...	...
30 to 34 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	2	3	3	1	1	...	1	...	...	...
35 to 39 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	1	...	...	...	...
40 to 44 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...
45 to 49 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	4	2	2	1	...	...	...	...	...	...
50 to 54 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...
55 to 59 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	3	5	...	...	...	...	...	...	...	...
60 to 64 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	3	6	2	...	...	...	...	...	...	...
65 to 69 “ ..	...	...	...	...	...	...	...	...	...	...	1	...	6	2	...	...	...	...	...	...	...	...
70 to 74 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	8	1	...	...	...	...	...	...	...	...
75 to 79 “ ..	...	...	...	...	...	...	...	...	...	...	1	...	5	6	...	...	...	...	...	...	...	...
80 to 84 “ ..	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	1	...	...	...	...	...	...
85 to 89 “ ..	...	...	...	...	...	...	...	...	...	...	2	1	...	2	...	...	...	...	...	...	...	...
90 to 94 “ ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	4	1	3	2	8	3	12	5	5	3	3	4	49	56	12	7	3	1	1	2	1	1

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	2	...	5	3	...	5	1	1	...	...	...	...	5	2	1	1	...	...	...	...	...	...	...	...
1 year.....	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
2 to 4 years.....	...	...	2	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...
5 to 9 “	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
10 to 14 “	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	2	1	2	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
20 to 24 “	2	1	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	2	4	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...
30 to 34 “	6	1	...	2	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
35 to 39 “	2	1	...	...	1	...	2	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
40 to 44 “	3	...	...	1	...	...	1	...	1	2	...	...	...	...	...	3	...	...	...	...	...	...	...	...
45 to 49 “	...	2	2	2	...	...	1	2	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
50 to 54 “	1	1	...	1	...	...	2	1	...	...	...	...	...	...	1	2	...	...	1	...	...	...	...	...
55 to 59 “	1	...	1	1	...	...	1	2	...	...	1	1	...	...	2	1	...	...	...	1	...	...	...	...
60 to 64 “	2	...	1	2	...	...	2	2	...	...	...	1	...	...	...	2	...	...	...	1	...	1	...	...
65 to 69 “	...	...	1	...	...	...	...	3	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...
70 to 74 “	1	...	...	...	...	1	2	3	...	...	...	3	...	...	...	...	...	...	2	1	1	...	...	...
75 to 79 “	...	1	...	2	...	...	2	5	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
80 to 84 “	...	...	1	2	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	1	...	...	2	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	24	14	18	19	1	9	16	24	4	3	6	8	6	4	6	13	...	...	3	4	1	2	2	3

AGE PERIODS AND WARDS. WARD XXV.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	4	...	...	...	1	...	6	9	2	1	...	...	5	8	...	...	...	...	...	...	...	...
1 year.....	...	...	...	...	...	1	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
2 to 4 years.	...	...	2	1	2	1	...	...	...	...	...	...	1	2	4	1	...	...	...	...	...	...
5 to 9 “	...	...	1	...	1	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...
10 to 14 “	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
15 to 19 “	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
20 to 24 “	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
25 to 29 “	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...
30 to 34 “	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
35 to 39 “	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
40 to 44 “	...	...	...	...	...	1	...	...	...	...	...	...	...	3	2	...	...	...	...	...	...	...
45 to 49 “	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	...	...	...	...	...	...
50 to 54 “	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
55 to 59 “	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...
60 to 64 “	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	...	...	...	...	...	...	...
65 to 69 “	...	...	...	...	...	...	...	...	...	...	...	...	5	...	1	1	...	...	...	...	...	...
70 to 74 “	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
75 to 79 “	...	...	...	...	...	...	...	...	...	1	...	...	2	1	...	...	...	...	...	...	...	...
80 to 84 “	...	...	...	...	...	...	...	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	4	...	3	1	5	4	6	9	2	3	...	1	33	26	12	3	...	...	...	...	...	...

TABLE XIII.—DEATHS: CAUSE BY

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 year.....	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 to 4 years	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 to 9 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 to 14 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 to 24 “	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 to 34 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 to 39 “	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
40 to 44 “	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
45 to 49 “	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
50 to 54 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
55 to 59 “	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
60 to 64 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
65 to 69 “	...	1	...	...	...	...	2	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
70 to 74 “	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
75 to 79 “	...	...	1	1	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
80 to 84 “	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2	4	7	4	...	...	2	5	...	...	5	...	...	...	...	...	...	1	...	...	...	...	...	...

AGE PERIODS AND WARDS. WARD UNKNOWN.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..							4	...	1	...	.....	.....	1	...	.....	.....	.....	.....	.....	.....	.....	.....
1 year.....																						
2 to 4 years.										1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5 to 9 "																						
10 to 14 "																						
15 to 19 "																						
20 to 24 "													1	.....	.....	.....	.....	.....	.....	.....	.....	.....
25 to 29 "																						
30 to 34 "																						
35 to 39 "													1	.....	.....	.....	.....	.....	.....	.....	.....	.....
40 to 44 "									1	.....	.....	.....	2	1	1	.....	.....	.....	.....	.....	.....	.....
45 to 49 "																						
50 to 54 "															1	.....	.....	.....	.....	.....	.....	.....
55 to 59 "																	1	.....	.....	.....	.....	.....
60 to 64 "														1	.....	.....	.....	.....	.....	.....	.....	.....
65 to 69 "														2	1	.....	.....	.....	.....	.....	.....	.....
70 to 74 "														1	.....	.....	.....	.....	.....	.....	.....	.....
75 to 79 "																						
80 to 84 "										1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
85 to 89 "																						
90 to 94 "											1	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....
95 and over...																						
							4	...	2	2	1	...	6	7	3	...	1	.....	.....	.....	.....	.....

TABLE XIII.—DEATHS: CAUSE BY AGE

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year.....	1	2	7	8	2	1	1	1	...	...	2	1	22	15	1	2	...	...	...	...	...	...	2	1
1 year.....	2	2	8	5	...	...	...	...	...	...	...	...	4	4	...	...	...	...	...	...	...	...	...	1
2 to 4 years....	4	2	4	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	4	
5 to 9 “	2	1	2	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
10 to 14 “	...	2	...	...	...	...	3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
15 to 19 “	2	6	...	...	...	...	2	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
20 to 24 “	8	10	1	...	...	...	1	3	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	
25 to 29 “	4	5	4	1	1	...	3	1	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...	
30 to 34 “	10	6	3	2	...	...	5	1	1	1	...	1	...	...	2	5	...	2	...	...	...	...	...	
35 to 39 “	8	4	8	2	...	...	4	2	3	1	1	...	...	...	2	2	...	1	1	2	...	...	...	
40 to 44 “	6	2	3	3	...	...	2	1	...	...	...	...	...	...	2	1	...	...	2	2	...	...	...	
45 to 49 “	2	...	1	2	...	...	4	3	...	...	1	3	...	...	2	6	...	1	5	4	...	...	...	
50 to 54 “	4	...	5	4	...	...	4	2	...	...	3	2	...	...	3	...	...	5	7	4	2	1	1	
55 to 59 “ ...	2	...	3	2	...	...	15	2	...	...	1	3	...	...	5	5	...	1	6	5	...	...	...	
60 to 64 “	...	...	5	5	...	...	6	3	...	...	1	2	...	...	2	2	...	3	3	8	...	2	...	
65 to 69 “	1	2	1	1	...	...	10	4	...	...	4	1	...	...	7	2	...	1	4	3	1	1	...	
70 to 74 “	...	1	6	...	...	...	6	3	...	...	2	3	...	...	3	2	...	...	3	3	...	...	...	
75 to 79 “	1	1	4	3	...	...	4	2	...	...	4	1	...	...	1	1	...	...	2	...	...	...	...	
80 to 84 “	...	...	1	4	...	1	2	...	...	...	1	1	...	...	...	1	...	...	1	...	...	...	...	
85 to 89 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	
90 to 94 “	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
95 and over.....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	57	46	66	50	3	3	74	31	5	4	21	18	26	19	32	33	...	14	35	31	4	4	4	7

PERIODS AND WARDS. NONRESIDENTS.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	1	...	...	...	2	5	14	15	4	1	...	...	56	46	...	1	...	...	...	...	3	...
1 year.....	...	...	...	...	3	5	...	...	2	1	...	...	2	6	2	1	...	...	...	...	...	1
2 to 4 years.	...	...	1	...	4	3	...	...	...	...	...	...	3	4	1	1	...	...	...	...	...	...
5 to 9 "	...	...	1	1	2	1	...	...	...	...	...	...	4	8	2	1	...	...	...	...	...	...
10 to 14 "	...	...	...	...	...	...	...	...	...	...	...	...	4	3	2	...	...	...	...	...	...	...
15 to 19 "	...	...	...	1	2	...	...	...	...	...	...	...	6	7	7	1	1	...	...	...	...	...
20 to 24 "	...	...	1	...	2	...	...	...	...	...	...	...	5	14	9	3	2	2	...	...	...	...
25 to 29 "	...	...	...	...	1	2	...	...	...	...	...	...	6	11	12	3	2	...	...	...	...	...
30 to 34 "	...	...	...	...	1	...	...	...	...	...	...	...	6	13	15	1	2	...	...	...	...	...
35 to 39 "	...	...	...	...	1	...	...	...	...	...	...	...	12	10	10	2	2	...	1	...	...	...
40 to 44 "	...	...	...	...	...	...	...	...	...	...	...	...	14	14	11	4	3	...	...	...	1	...
45 to 49 "	...	...	...	...	...	...	...	...	...	...	...	...	16	7	13	7	4	...	...	...	...	...
50 to 54 "	...	...	...	...	...	...	...	...	...	1	...	...	12	9	8	5	1	1	...	...	...	...
55 to 59 "	...	...	...	...	...	...	...	...	...	...	...	...	14	9	9	5	1	...	...	...	...	...
60 to 64 "	...	...	...	...	1	...	...	...	...	...	...	...	11	10	6	3	4	...	...	...	...	...
65 to 69 "	...	...	...	...	...	...	...	...	...	...	...	...	6	5	4	1	...	...	...	...	...	...
70 to 74 "	...	...	...	...	1	...	...	...	...	...	1	...	7	5	3	3	1	...	...	...	2	...
75 to 79 "	...	...	...	...	...	...	...	...	...	...	...	...	7	2	5	...	...	...	...	...	1	...
80 to 84 "	...	...	...	...	...	...	...	...	...	...	1	2	1	...	1	1	...	...	...	...	...	...
85 to 89 "	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	1	...	...	...	...	...	...
90 to 94 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1	...	3	2	20	16	14	15	6	3	2	2	194	179	120	44	23	3	1	...	7	1

TABLE XIII.—DEATHS: CAUSE BY AGE

AGE PERIOD.	Phthisis and Tuberculosis.		Pneumonia.		Bronchitis.		Heart Disease.		Typhoid and Typhus Fever.		Apoplexy, Cerebral Hemorrhage.		Congenital Debility, Inanition, Marasmus.		Kidney Diseases.		Cancer (Uterine).		Cancer of Organs (Vital).		Cancer of Tissues and Non-Vital Organs.		Diphtheria.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year	1	1	8	9	...	...	1	2	...	...	...	...	90	69	1	2	...	...	...	...	...	...	1	...
1 year	1	4	5	4	...	...	...	...	...	...	...	...	7	4	1	...	...	...	...	...	...	...	...	...
2 to 4 years.....	...	...	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
5 to 9 “	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 to 14 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
15 to 19 “	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
20 to 24 “	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 “	...	1	1	...	1	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...
30 to 34 “	...	2	1	2	1	...	...	...	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
35 to 39 “	...	...	1	...	2	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
40 to 44 “ ...	...	2	1	4	2	...	...	3	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
45 to 49 “	...	1	1	2	2	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
50 to 54 “	...	...	...	1	1	...	...	2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...
55 to 59 “	...	...	...	2	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
60 to 64 “	...	...	...	1	1	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
65 to 69 “	...	...	...	1	...	...	...	3	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
70 to 74 “	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
75 to 79 “	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
80 to 84 “	...	...	...	...	1	...	...	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...
85 to 89 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 to 94 “	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	9	11	31	28	...	1	15	12	2	1	8	3	97	73	4	3	...	...	...	...	...	...	1	5

PERIODS AND WARDS. RESIDENCE UNKNOWN.

AGE PERIOD.	Cholera Infantum.		Scarlet Fever.		Meningitis.		Prematurity.		Enteritis.		Senile Debility.		All Others.		Accidental.		Suicide.		Homicide.		Unknown.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 year..	2	...	1	...	2	...	9	4	1	2	...	...	13	9	...	...	...	...	1	3	...	...
1 year.....	...	...	...	...	1	...	...	...	1	...	...	...	2	1	...	...	...	...	...	...	...	...
2 to 4 years.	...	...	1	1	2	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
5 to 9 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10 to 14 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 to 19 "	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
20 to 24 "	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 to 29 "	...	...	...	...	...	...	...	...	...	...	...	...	1	7	...	2	...	...	2	1	...	...
30 to 34 "	...	...	...	...	...	...	...	...	...	...	...	...	2	1	4	...	1	...	...	1	...	...
35 to 39 "	...	...	...	...	1	...	...	...	...	...	...	...	2	1	4	...	2	...	1	...	...	...
40 to 44 "	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...
45 to 49 "	...	...	...	...	...	...	...	...	...	...	...	...	3	...	5	...	1	...	...	1	...	...
50 to 54 "	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	1	...	...	...	1	...
55 to 59 "	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	...	...	...	1	...	...
60 to 64 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
65 to 69 "	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	...	...
70 to 74 "	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...
75 to 79 "	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
80 to 84 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
85 to 89 "	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
90 to 94 "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
95 and over...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
	2	...	2	1	7	...	9	4	1	3	...	1	32	20	30	...	7	...	1	3	8	1

OCCUPATIONS OF MALE DECEDENTS, 1908.

Government, National.

Military service	4
Department officials	8
Department clerks	6
Letter carriers	6
Miscellaneous	2

State.

Miscellaneous	2
-------------------------	---

City.

Department heads	2
Department official	1
Fire Department	6
Police Department	29
Unskilled mechanics and laborers	5
Inspector of labor	1
Miscellaneous	1

Professional.

Clergymen	14
Religious, miscellaneous	1
Judge	1
Lawyer	14
Naturalist	1
Physicians and surgeons	22
Dentists	4
Veterinarians	2
Nurses	2
Journalists	5
Editors	2
Reporters	3
Author	1
Architects	3
Artists (painting, drawing)	2
Sculptor	1
Musicians and teachers of music, instrumental	15
Musicians, vocal	4
Actors	2
Instructors, school and college	3
Teachers, schools	4
Students, over 18 years	24
Students, under 18 years	118
Civil engineers, surveyors and draughtsmen	8

Domestic Service.

Hotel keepers	5
Boarding and lodging house keeper	1

Restaurant keepers	6
Cooks	17
House servants	2
Butlers	2
Stewards	2
Waiters	37

Trade, Commerce and Finance.

Merchants and dealers	233
Peddlers and hawkers.	27
Bankers, brokers, business agents	46
Clerks	267
Salesmen	89
Shippers and packers	29
Foremen	27
Managers	16
Bookkeepers and accountants	30
Cashier	1
Bank clerks, tellers, etc.	2
Canvassers	4
Messengers, porters, etc.	27
Miscellaneous	3
Builders	12
Contractors (not specified)	10

Transportation.

Teamsters, truckmen, etc.	170
Cab and coach drivers	38
Conductors, railroad (steam and electric)	8
Brakemen	14
Motormen	18
Switchmen	4
Gatekeepers	7
Signalmen	2
Starters	3
Inspectors	6
Yardmen	4
Stevedores	2
Longshoremen	13
Wharfinger	1
Miscellaneous	10

Marine Occupations.

Sailors	22
Fishermen	9
Pilots	2
Engineer	1
Firemen	2
Deckhands	2
Miscellaneous	7

Manual Labor.

Barbers and hairdressers	31
Bakers and confectioners	29
Blacksmiths	33
Boot and shoemakers and operatives	46
Butchers	11
Brewers and distillers	3
Boilermakers	2
Bridge builders	3
Boxmaker	1
Bartenders and wine clerks	10
Bootblack	1
Brushmakers	2
Bookbinders	6
Bottlers	3
Cabinetmakers	10
Carpenters and joiners	112
Cigar and tobacco workers	13
Coopers	11
Calker	1
Clock and watchmakers	3
Carriage trimmers	4
Chemists	13
Chauffeurs	3
Coppersmiths	3
Cutters, clothing	6
Engineers (not specified)	49
Electricians (working)	22
Engravers	5
Firemen (not specified)	28
Farmers and farm laborers	24
Florists	8
Furriers	3
Gardeners	16
Gold and silversmiths	5
Glassworker	1
Harnessmakers	13
Iron, steel and metal workers	40
Inspectors (?)	5
Inspectors (gas)	6
Iceman	1
Janitors	32
Jewelers	6
Laborers	568
Laundry workers	11
Leather workers (not boots and shoes)	7
Lathers	3
Mechanics (?)	6

Mechanics (theatrical)	3
Machinists	77
Marble and stoneworkers	19
Masons (brick and stone)	43
Mill and factory operatives	25
Molders (?)	6
Mosaic worker	1
None	2,442
Optician	2
Piano and organ builders	2
Printers, composers and pressmen	39
Painters, glaziers, decorators and gilders	101
Paperhangers	7
Plasterers and whitewashers	11
Photographers	9
Plumbers	23
Picture framer	1
Paper rulers and cutters	2
Riggers	5
Roofers	12
Retired	241
Rubber workers	7
Ropemakers	4
Sailmakers	2
Soapmaker	1
Shipbuilders and ship carpenters	8
Steam and gas fitters	10
Stable keepers	3
Stablemen	31
Stereotyper	1
Tailors	52
Tinware makers	8
Telegraph and telephone operators	4
Tileworker	1
Undertakers	3
Unknown	114
Upholsterers	8
Woodworkers	9
Wheelwrights	3
Wireworkers	4
Watchmen	23
Elevatormen	5
Inventors	3
Furniture polishers	11
Caretakers	2
Gunsmiths	2
Lithographers	2
Chiropodists	2
And one each of eleven trades or occupations not easily classified.	

OCCUPATIONS OF FEMALE DECEDENTS, 1908.

Professional	22
Domestic service	476
Mercantile and commercial	72
Dressmakers	36
Milliners	8
Mill and factory operatives	52
Seamstresses	17
Tailoresses	15
Candymakers	4
At school	86
At home	556
Housewives and housekeepers	975
None	3,024
Waitresses	12
Retired	24
Bookbinders	8
Laundresses	11
Telephone and telegraph operators	9
Religious	16
Unknown	58
Students	13
Stenographers	9
Nurses	26
Matron (?)	4
Compositors and proof readers	4
Teachers of music	4
Lodging house keepers	2
Musicians	2
Artists	2
Laborers	2

And one each of governess, hotel proprietor, masseur, hair-dresser, palmist, clairvoyant, manicurist, astrológer and librarian.

MARRIAGES IN BOSTON IN 1908.

There were 6,993 marriages recorded as having taken place in Boston in 1908, a decrease of 768 from the number of 1907, and 381 less than in 1906.

In 6,721 cases both contracting parties were white; in 249 cases both parties were colored. There were 23 cases of mixed marriages, 19 between a colored groom and white bride and 4 between white grooms and colored brides.

Months and Seasons.— The greatest number of marriages for a single month was in June, 894; the least number for a month was 421, in March.

The greatest number of marriages in any quarter-year period was 1,969, in the last quarter of the year; the least number was 1,495, in the first quarter of the year.

Marriages by Religious and Civil Officials.— There were 5,811 marriages solemnized by clergymen and 1,182 by justices of the peace and other civil officials.

Residents and Nonresidents.

There were 13,986 persons married in Boston in 1908; of these, 11,456 were residents of Boston, or one in every 54.86 of the population. The marriage rate based upon the total number of people married was 22.25; based upon the number of residents of Boston who were married, it was 18.22.

The number of nonresidents married in Boston was 2,530.

In 5,153 cases both parties were residents of Boston.

In 656 cases both parties were residents elsewhere in the United States.

In 270 cases the grooms were residents of Boston, and their brides resided elsewhere in the United States.

In 804 cases the grooms were residents elsewhere in the United States and the brides were residents of Boston.

In 41 cases the grooms were residents of Boston, and the brides were foreign residents.

In 32 cases the brides were residents of Boston and the grooms were foreign residents.

In 19 cases the grooms were residents elsewhere in the United States and their brides were residents of foreign countries.

In 3 cases the bride was a resident of the United States (out of Boston) and the grooms were residents of foreign countries.

In 12 cases both parties were residents of foreign countries.

Mixed (as to color) Marriages.

There were 19 cases of marriage between colored men and white women, and 4 cases of white grooms and colored brides; of these 23 cases of mixed marriages 13 were performed by clergymen and 10 by civil authority.

MARRIAGES: AGES OF GROOMS AND BRIDES. (TABLE XV.)

In 2,168 marriages, or 31 per cent, both contracting parties were of the same age, or in the same 5-year age period. The number of grooms of less than 25 years of age was 2,247, or 32.13 per cent. The number of grooms between 25 and 35 years of age was 3,320, or 47.47 per cent. The number of grooms less than 21 years of age was 221, or 3.1 per cent.

The number of brides who had not reached the age of 25 years was 3,837, or 54.86 per cent. The number of brides between the ages of 25 and 35 years was 2,382, or a little more than 34 per cent. The number of brides who had not reached the age of 18 years was 166, or 2.37 per cent.

MARRIAGES: NATIVITIES OF BOTH PARTIES. (TABLE XVI.)

There were 1,254 grooms who were born in Boston, or 17.9 per cent of the whole number of grooms; 649 of these were married to natives of Boston, and 319 were married to natives of the United States exclusive of those born in Boston, while 319, or 25.4 per cent, married natives of some foreign country.

The grooms born in the United States (exclusive of those born in Boston) were 2,097; of their brides 502 were natives of Boston, 1,048 were natives of the United States (exclusive of Boston), while the remainder, 547, or 26 per cent, married natives of various foreign countries. The relative nativities of all the grooms and brides married in Boston in 1908 are given in the table.

The native grooms who married native brides numbered 2,518, or 75.14 per cent; those who married brides of foreign birth were 833, or 24.86 per cent.

The native brides who married native grooms was 2,518, or 78.89 per cent; those who married foreign grooms were 682, or 21.11 per cent.

The figures in large type arranged diagonally across the table indicate the number of marriages between natives of the same foreign country.

NUMBER OF MARRIAGE. (TABLE XVII.)

There were 6,084 grooms and 6,171 brides who had not been previously married.

There were 667 widowers and 532 widows who married the second time; 40 widowers and 29 widows who married the third time; 1 widower and 3 widows who married the fourth time.

One hundred and eighty-six divorced grooms and 254 divorced brides married the second time; 7 divorced grooms and 3 divorced brides married the third time, and 1 divorced groom married the fourth time.

The relative number of marriage of all the grooms and brides who were married in Boston in 1908 is given in Table XVII.

Marriages of Divorced Persons.

There were 452 persons of both sexes who had been divorced that were married in 1908, or 3.2 per cent; there were 43 cases where both parties had been divorced; 154 cases where the groom only was divorced, and 217 cases in which the bride only had been divorced.

TABLE XIV.—MARRIAGES BY MONTHS AND QUARTERLY PERIODS: CIVIL AND RELIGIOUS.

	MARRIAGES.		BOTH PARTIES WHITE.			BOTH PARTIES COLORED.			COLORED GROOM, WHITE BRIDE.			WHITE GROOM, COLORED BRIDE.			TOTAL.	
	Per Month.	Per Quarter.	Clergyman.	Justice.	Total.	Clergyman.	Justice.	Total.	Clergyman.	Justice.	Total.	Clergyman.	Justice.	Total.	Clergyman.	Justice.
January.....	568	First Quarter, 1,495	{450	103	553	11	4	15	.....	.....	.....	.....	.....	.....	461	107
February.....	506	1,495	{403	88	491	13	2	15	.....	.....	.....	.....	.....	.....	416	90
March.....	421		{311	80	391	26	1	27	.....	1	3	.....	.....	.....	339	82
April.....	522	Second Quarter, 1,849	{400	92	492	27	3	30	.....	.....	.....	.....	.....	.....	427	95
May.....	433	1,849	{335	82	417	11	4	15	.....	*1	1	.....	.....	.....	346	87
June.....	894		{767	102	869	19	4	23	.....	†1	2	.....	.....	.....	787	107
July.....	499	Third Quarter, 1,680	{392	92	484	11	2	13	.....	*2	2	.....	.....	.....	405	94
August.....	479	1,680	{356	102	458	11	5	16	.....	2	5	.....	.....	.....	369	110
September.....	702		{579	97	676	20	4	24	.....	†1	1	.....	.....	1	600	102
October.....	773	Fourth Quarter, 1,969	{627	117	743	23	3	26	.....	†2	2	.....	.....	1	651	122
November.....	740	1,969	{614	97	712	21	5	26	.....	†1	3	.....	.....	.....	637	103
December.....	456		{355	80	435	16	3	19	.....	.....	.....	.....	.....	2	373	83
Totals.....	6,993	6,993	5,589	1,132	6,721	209	40	249	9	10	19	4	.....	4	5,811	1,182

* One case, groom Japanese. † One case, Chinese. ‡ One case, Indian.

TABLE XV.—MARRIAGES: AGES OF GROOMS AND BRIDES (RELATIVE).

AGES OF GROOMS.	AGES OF BRIDES.														TOTAL GROOMS.				
	14 Years.	15 Years.	16 Years.	17 Years.	18 Years.	19 Years.	20 Years.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.		55 to 59.	60 to 64.	65 to 69.	70 to 74.
17 years.....	8			3	2	1	2												
18 ".....	26	2	2	10	1	6	2		2	1									
19 ".....	57	1	5	9	14	13	5	8	1	1									
20 ".....	130	1	4	10	21	25	30	31	7	1									
21 to 24 years.....	2,026	1	17	61	173	278	324	931	198	30	5	2	1						
25 to 29 ".....	2,230	3	4	18	85	132	186	885	728	151	30	5	2		1				
30 to 34 ".....	1,090		2	7	19	25	34	279	383	259	66	11	4	1					
35 to 39 ".....	655			1	3	5	9	96	216	159	112	39	12	2	1				
40 to 44 ".....	321					2	4	21	67	76	81	48	17	4			1		
45 to 49 ".....	200							13	19	44	61	39	16	6		1			
50 to 54 ".....	128							4	11	17	19	34	25	14	4				
55 to 59 ".....	64								3	5	13	11	16	6	7	2	1		
60 to 64 ".....	30								1	1	4	3	8	6	4	3			
65 to 69 ".....	20							1		1	2	2	3	3	2	2	3	1	
70 to 74 ".....	5										1			1	2		1		
75 to 79 ".....	2											1			1				
80 to 84 ".....	1																	1	
Total brides.....	6,993	2	11	34	119	318	488	596	2,269	1,636	746	394	195	104	43	22	8	6	2

TABLE XVI.— MARRIAGES: NATIVITY OF GROOMS AND BRIDES (RELATIVE).

BIRTHPLACES OF GROOMS.	BIRTHPLACES OF BRIDES.																						
	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	China.	France.	Turkey.	Austria.	Portugal.	Holland.	Belgium.	Switzerland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
Boston	649	319	91	119	31	9	10	15	3	3	3	1	...	2	...	...	...	1	...	...	1	...	...
United States, out of Boston,	502	1,048	112	295	66	16	1	17	3	15	...	2	...	6	...	...	...	3	...	...	6	...	...
Ireland	37	22	402	20	5	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...
British-American Provinces.	119	147	48	349	13	1	1	1	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...
Great Britain	48	61	42	40	84	5	...	6	...	3	...	2	...	3	...	...	...	...	...	...	...	...	...
Germany	82	23	15	4	2	22	...	4	2	1	...	...	...	3	...	...	1	...	...	...	...	...	...
Italy	730	33	6	6	3	2	624	773	2	...	...	1	...	18	...	...	...	...	...	...	...	...	...
Russia	869	21	...	...	7	8	...	...	22	8	...	1	...	...	...	...	...	...	...	...	...	...	...
Norway	34	2	1	...	...	...	...	3	3	105	...	1	...	...	...	...	...	...	...	...	...	...	...
Sweden	139	10	4	7	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
China	4	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
France	16	3	...	1	...	1	...	1	...	...	...	4	...	...	...	...	1	...	...	...	...	...	...
Turkey	66	3	1	3	...	...	...	...	1	...	...	...	57	1	...	...	...	...	...	...	...	...	...
Austria	74	7	2	1	1	4	...	12	...	...	...	...	...	44	15	...	...	...	...	...	...	...	...
Portugal	21	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Holland	9	...	...	2	...	1	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...
Belgium	8	4	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...
Switzerland	6	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greece	14	...	2	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	7	...	...	...	...
Denmark	22	3	1	3	2	...	...	...	...	3	...	...	...	...	...	...	...	...	...	7	...	...	...
Cuba and West Indies.	51	24	...	4	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	16	...	...
All Others	30	7	2	2	3	...	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Unknown	1	...	...	...	*1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total brides	6,993	1,497	720	858	221	70	637	836	36	145	...	13	58	77	19	1	6	6	7	13	24	14	2

* At sea.

TABLE XVII.— MARRIAGES: NUMBER OF MARRIAGE (RELATIVE).

GROOMS.	TOTAL GROOMS.	BRIDES.					
		First.	Second Widowed.	Third Widowed.	Fourth Widowed.	Second Divorced.	Third Divorced.
First	6,081	5,598	317	10	.....	156	.....
Second widowed.....	664	421	178	14	1	48	2
Third widowed.....	37	19	13	2	.....	3	.....
Fourth widowed.....	1	1	.....	.....	.....	.....	.....
Second divorced.....	185	124	22	.....	.....	39	.....
Third divorced.....	6	5	1	.....	.....	.....	.....
Fourth divorced.....	1	.....	.....	.....	.....	1	.....
Miscellaneous	18	.....	.....	.....	.....	.....	.....
Totals.....	6,993	6,168	531	26	1	247	2

NUMBER OF MARRIAGE MISCELLANEOUS.

GROOMS.	BRIDES.	Number
First.....	Second, void.....	1
First.....	Second, divorced and widowed.....	1
First.....	Third, widowed and divorced.....	1
Second, annulled.....	First.....	2
Second, annulled.....	Second, widowed.....	1
Second, annulled.....	Third, widowed.....	1
Second, annulled.....	Second, divorced.....	1
Second, widowed.....	Fourth, widowed and divorced.....	1
Second, widowed.....	Second, divorced and widowed.....	1
Second, widowed.....	Third, divorced and widowed.....	1
Third, widowed.....	Third, widowed and divorced.....	1
Third, widowed.....	Fourth, widowed and divorced.....	1
Third, widowed and divorced.....	Second, divorced.....	2
Second, divorced and widowed.....	First.....	2
Third, divorced and widowed.....	Second, divorced.....	1
	Total.....	18

MARRIAGES.—OCCUPATIONS OF GROOMS, 1908.

Government, National.

Military service	26
Naval service	12
Department officials	3
Department clerks	24
Letter carriers	21
Miscellaneous	7

State.

Department clerks	2
Miscellaneous	3

City.

Department officials	2
Department clerk	1
Fire Department	19
Police Department	39
Skilled mechanic	1
Unskilled mechanics and laborers	2
Inspector	1
Miscellaneous	2

Professional.

Clergymen	14
Religious, miscellaneous	5
Judge	1
Lawyers	45
Civil engineers	12
Physicians and surgeons	37
Dentists	26
Veterinarian	1
Nurses	7
Hospital attendants	2
Journalists	8
Editors	4
Reporters	9
Botanists	2
Correspondent	1
Architects	17
Artists (painting, drawing)	39
Sculptor	1
Musicians, not specified	41
Musicians, music teachers	4
Actors	21
Miscellaneous entertainment	40
Instructors, school and college	4
Teachers, schools	20
Students, over 18 years	16

Domestic Service.

Hotel keepers	12
Restaurant keepers	24
Restaurant helpers	15
Cooks	60
Stewards	14
House servant	1
Butlers	19
Waiters	127

Trade, Commerce and Finance.

Merchants and dealers	349
Peddlers and hawkers	36
Bankers, brokers and business agents	98
Clerks	474
Salesmen	340
Shippers and packers	75
Managers, buyers and superintendents	65
Bookkeepers and accountants	79
Cashiers and treasurers	22
Bank clerks, tellers, etc.	10
Promoter	1
Messengers and porters, etc.	83
Miscellaneous	16
Builders	7
Contractors (not specified)	15
Contractor, electric	1

Transportation.

Teamsters and truckmen, etc.	340
Cab and coach drivers	72
Conductors, railroad (steam and electric)	63
Engineers, railroad	2
Firemen, railroad	18
Brakemen	38
Motormen	49
Switchmen	2
Gatekeepers	3
Starters	4
Inspectors	5
Yardman	1
Freight handlers	15
Longshoremen	8
Railroad employees (miscellaneous)	22

Marine Occupations.

Sailors	62
Fishermen	32
Pilots	2
Engineers	10

Firemen	10
Deckhands	2
Miscellaneous	3

Personal Service.

Valet	3
-----------------	---

Manual Labor.

Asbestos worker	1
Barbers and hairdressers	101
Bakers and confectioners	97
Blacksmiths	40
Boot and shoemakers and operatives	253
Butchers and meat cutters	30
Brewers and distillers	15
Boilermakers	10
Bridge builders	4
Boxmakers	8
Bartenders and wine clerks	25
Bootblacks	5
Brushmakers	4
Bookbinders	20
Boatmakers	4
Bottlers	11
Cabinetmakers	22
Carpenters and joiners	159
Cigar and tobacco workers	37
Coopers	2
Clothing cutters	10
Calker	1
Clock and watchmakers	7
Carriage trimmers	3
Carriage painters	7
Chemists	27
Chauffeurs	33
Coppersmiths	7
Coremakers	5
Cutters (?)	7
Dyers and dye workers	3
Divers	2
Designers	6
Drillers	2
Engineers (stationary)	15
Engineers, not specified	54
Electricians (working)	84
Electrotypers	2
Engravers	7
Firemen (stationary)	20
Firemen, not specified	34
Farmers and farm laborers	78
Florists	15

Fish curers and fish cutters	3
Furriers	3
Gardeners	21
Gold and silver smiths	5
Glassworkers	3
Harnessmakers	4
Iron, steel and metal workers	102
Inspectors (?)	7
Icemen	5
Janitors	50
Jewelers	23
Laborers	754
Laundry workers	14
Leather workers (not boots and shoes)	23
Lamplighters	3
Lathers	6
Mechanics (?)	15
Mechanics, theatrical	7
Machinists	217
Marble and stone workers	24
Masons (brick and stone)	39
Mill and factory operatives	110
Millwright	1
Molders (?)	11
Mattressmaker	1
Miners	2
Masseur	1
None	7
Opticians	6
Piano and organ builders	17
Printers, compositors and pressmen	84
Painters, glaziers, decorators and gilders	145
Patternmakers	11
Paperhangers	9
Plasterers and whitewashers	4
Photographers	10
Plumbers	53
Picture framer	1
Paper rulers and cutters	7
Potters	2
Riggers	7
Roofers	14
Retired	10
Rubber workers	20
Ropemakers	3
Shipbuilders and carpenters	3
Steam and gas fitters	42
Stable keepers	4
Stablemen	24
Stereotypers	3
Tailors	202

Tinwaremakers	26
Telegraph and telephone operators	24
Tileworkers	2
Undertakers	7
Upholsterers	13
Woodworkers	12
Wheelwright	1
Wireworkers	20
Engineers, building	4
Engineers, mining	3
Engineers, mechanical	10
Engineers, electrical	5
Operators (?)	25
Toolmakers	7
Lumbermen	4
Carriagesmiths	4
Locksmiths	4
Caretakers	4
Publishers	6
Surveyors	4
Athletic instructors	4
Foremen (?)	55
Watchmen	10

Three each of the following trades or occupations: Musical instrument maker, collier and lithographer; two each of meter makers, gypsy moth men, edge setters, egg lighters, sawyers, chiropodists, adjusters, meter readers, cleansers and gas house men; and one each of thirty-three trades or occupations not easily classified.

OCCUPATIONS OF BRIDES, 1908.

Mercantile	820
Professionals	63
Leather workers	5
Needle workers	623
Telegraph and telephone operators	42
Rubber workers	22
Boxmakers and bookbinders	55
Candyworkers and confectioners	100
Cigarmakers	34
Brush and broommakers	12
Mill and factory operators	469
Waitresses	289
Gold and silver workers	2
At home	1,761
Students	12
Domestics	1,107
Boarding and lodging house keepers	12
Printers and compositors	19

None	629
School teachers	67
Housekeepers	427
Nurses	119
Hairdressers	8
Actresses	16
Laborers	24
Assistant librarians	2
Laundress and laundry workers	109
Milliners	84
Lunch room proprietors	5
Manicurists	8
Journalists	2
Matrons	4
Janitresses	4
Governesses	4
Designers	2
Watchmakers	2
Engravers	3
Doctors' assistants	2
Photographers	2
Teachers of dancing	2

And one each of the following trades or occupations: Writer, electric worker, midwife, pattern setter, decorative painter, woodworker, caterer, masseuse, store detective, osteopath, arbor culturalist, Christian Scientist healer and helper.

TABLE XVIII.—MARRIAGES, 1908: NATIVITY OF GROOMS AND BRIDES AND NUMBER OF MARRIAGE.

	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	China.	France.	Turkey.	Austria.	Portugal.	Holland.	Belgium.	Switzerland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
GROOMS.																							
First.....	1,147	1,709	426	578	240	68	673	804	30	126	4	12	59	63	19	6	7	4	14	20	47	28	.....
Second, widowed.....	85	248	57	80	41	9	52	56	4	10	.....	2	5	8	1	1	.....	2	.....	2	3	1	.....
Second, void.....	1	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third widowed.....	2	24	3	3	3	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Third, widowed and divorced.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fourth, widowed.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Second, divorced.....	17	105	3	22	7	3	4	9	.....	3	.....	.....	1	3	1	2	.....	.....	.....	.....	1	1	*1
Second, divorced and widowed.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third, divorced.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third, divorced and widowed.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fourth, divorced.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	1,254	2,097	489	686	291	82	730	869	34	139	4	16	66	74	21	9	8	6	14	22	51	30	1
BRIDES.																							
First.....	1,411	1,399	649	720	183	54	595	778	36	132	.....	10	53	68	18	1	6	5	7	12	20	13	*2
Second, widowed.....	59	170	62	94	24	9	37	47	.....	11	.....	2	4	6	1	.....	.....	.....	.....	1	4	1	.....
Second, void.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third, widowed.....	2	16	1	3	2	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third, widowed and divorced.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fourth, widowed.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fourth, widowed and divorced.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Second, divorced.....	23	141	7	41	12	5	3	11	.....	2	.....	1	1	3	.....	.....	.....	1	.....	.....	.....	.....	.....
Second, divorced and widowed.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third, divorced.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Third, divorced and widowed.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	1,497	1,733	720	858	221	70	637	836	36	145	.....	13	58	77	19	1	6	6	7	13	24	14	2

* At sea.

TABLE XIX.—MARRIAGES: AGE PERIOD AND NATIVITY OF GROOMS.

AGE PERIOD.	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	China.	France.	Turkey.	Austria.	Portugal.	Holland.	Belgium.	Switzerland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
17 years.....	6	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 ".....	17	5	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 ".....	25	10	.....	3	1	.....	12	4	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
20 ".....	40	31	.....	3	8	1	27	16	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....
21 to 24 years.....	398	531	55	150	65	14	294	379	12	33	2	3	21	29	9	1	3	2	.....	3	6	8	8
25 to 29 ".....	367	582	186	219	103	29	248	324	10	46	1	6	28	27	6	1	2	.....	4	4	24	13	.....
30 to 34 ".....	204	359	113	119	37	15	76	77	5	34	.....	2	7	5	4	2	2	2	2	6	7	11	2
35 to 39 ".....	103	231	72	95	25	8	39	38	3	16	.....	.....	7	6	.....	2	.....	.....	1	2	4	3	.....
40 to 44 ".....	40	132	20	52	24	6	20	12	1	2	1	3	2	3	.....	.....	.....	.....	.....	.....	1	2	.....
45 to 49 ".....	25	87	22	19	15	5	7	5	1	4	.....	2	.....	1	.....	2	.....	1	.....	2	2	.....	.....
50 to 54 ".....	20	61	10	13	7	1	3	8	1	.....	.....	.....	.....	1	1	1	.....	.....	.....	1	.....	.....	.....
55 to 59 ".....	4	28	7	8	4	.....	1	5	1	3	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....
60 to 64 ".....	4	19	2	1	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65 to 69 ".....	1	14	2	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
70 to 74 ".....	.....	4	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
75 to 79 ".....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80 to 84 ".....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	1,254	2,097	489	686	291	82	730	869	34	139	4	16	66	74	21	9	8	6	14	22	51	30	1

* At sea.

TABLE XX.—MARRIAGES: AGE PERIOD AND NATIVITY OF BRIDES.

Age Period.	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	China.	France.	Turkey.	Austria.	Portugal.	Holland.	Belgium.	Switzerland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
14 years.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 ".....	5	3	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 ".....	12	4	.....	3	.....	.....	14	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 ".....	44	18	.....	4	1	1	44	2	.....	1	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....
18 ".....	67	84	1	21	2	3	78	40	.....	3	.....	1	11	3	3	.....	.....	.....	.....	.....	.....	2	.....
19 ".....	121	109	10	28	8	5	89	97	4	4	.....	.....	4	5	1	.....	.....	.....	1	1	.....	.....	*1
20 ".....	111	124	15	47	7	2	72	174	2	4	.....	.....	11	19	.....	.....	1	1	.....	2	3	1	.....
21 to 24 years.....	511	492	171	280	80	19	189	385	9	42	.....	3	20	30	7	1	1	1	6	6	9	7	.....
25 to 29 ".....	369	376	297	224	65	17	92	90	13	54	.....	6	8	10	4	.....	.....	1	.....	2	6	2	.....
30 to 34 ".....	155	217	122	108	33	11	36	19	6	23	.....	1	2	4	1	.....	1	2	.....	1	3	.....	1
35 to 39 ".....	58	142	51	74	17	5	12	12	2	8	.....	2	1	1	1	.....	2	1	.....	.....	3	2	.....
40 to 44 ".....	25	75	36	38	2	3	3	6	.....	4	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....
45 to 49 ".....	12	45	7	22	3	1	4	7	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
50 to 54 ".....	2	22	7	7	1	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
55 to 59 ".....	3	12	3	1	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 to 64 ".....	.....	7	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65 to 69 ".....	1	1	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
70 to 74 ".....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	1,497	1,733	720	858	221	70	637	836	36	145	.....	13	58	77	19	1	6	6	7	13	24	14	2

* At sea.

TABLE XXI.—AGE AND NATIVITY OF ILLITERATE MALE APPLICANTS FOR MARRIAGE LICENSES.

	Totals.	18 Years.	19 Years.	20 Years.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 to 64.	65 to 69.	80 to 84.
Boston.....	1	1						1							
United States outside of Boston.....	10						3	1	1		3		1		1
Ireland.....	18				1	6	7	2	1			1			
British-American Provinces.....	7				2	2	2	1							
Great Britain.....	1				1										
Italy.....	134	1	1	3	42	44	17	9	10	4	2	1			
Russia.....	137		1	4	58	40	14	8		4	4	1	2	1	
Turkey.....	15				9	4	1		1						
Austria.....	5					4			1						
Portugal.....	4					2					1			1	
Greece.....	1							1							
Cuba, West Indies.....	4					1	2			1					
All Other Countries.....	1				1										
Totals.....	338	1	2	7	114	103	46	23	14	9	10	3	3	2	1

OUT-OF-TOWN MARRIAGES RECORDED IN BOSTON
IN 1908.

There were 1,400 marriages recorded in this office in 1908 that were not solemnized in this city; there were 53 less than in 1907. In 420 cases both parties were residents of Boston; in 759 cases the groom only was a resident of Boston; in 208 cases, the bride only was a resident of this city; in 8 cases the groom and in 3 cases the bride were residents of a foreign country.

TABLE XXII.—OUT-OF-TOWN MARRIAGES: BY MONTHS,
COLOR, RELIGIOUS AND CIVIL.

MONTHS.	Number per Month.	WHITE.			COLORED.			COLORED GROOM, WHITE BRIDE.		
		Clergyman.	Justice.	Total.	Clergyman.	Justice.	Total.	Clergyman.	Justice.	Total.
January.....	94	86	6	92	2	.....	2	.....	.....	.....
February.....	90	83	5	88	1	.....	1	*1	.....	1
March.....	77	64	9	73	4	.....	4	.....	.....	.....
April.....	120	111	6	117	3	.....	3	.....	.....	.....
May.....	71	66	5	71	.....	.....	.....	.....	.....	.....
June.....	216	204	7	211	5	.....	5	.....	.....	.....
July.....	96	89	5	94	2	.....	2	.....	.....	.....
August.....	110	101	9	110	.....	.....	.....	.....	.....	.....
September.....	148	137	5	142	5	.....	5	1	.....	1
October.....	158	148	6	154	4	.....	4	.....	.....	.....
November.....	127	118	8	126	1	.....	1	.....	.....	.....
December.....	93	82	10	92	.....	1	1	.....	.....	.....
Totals.....	1,400	1,289	81	1,370	27	1	28	2	.....	2

* Groom Chinese.

Months and Seasons.— The greatest number of these marriages for any month was in June, 216; the least number for any month was in May, 71; the greatest number for any quarter-year period was 407, in the second quarter of the year; the least number was 261, in the first quarter of the year.

Color.— There were 1,370 marriages where both parties were white; 28 cases where both parties were colored; and 2 cases where the groom was colored and the bride white.

TABLE XXIII.—OUT-OF-TOWN MARRIAGES: BY MONTHS AND RESIDENCE (GENERAL).

MONTHS.	Total per Month.	Both Residents of Boston.	Groom Resident of Boston; Bride Resident of United States, outside of Boston.	Groom Resident Elsewhere in the United States; Bride Resident of Boston.	Groom Resident of Boston; Bride Resident of Foreign Country.	Groom Foreign Resident; Bride Resident of Boston.	Both Residents of the United States.*
January.....	94	29	54	11	.....	.....	.....
February.....	90	27	47	15	1	.....	.....
March.....	77	33	27	16	.....	1	.....
April.....	120	32	71	17	.....	.....	.....
May.....	71	20	37	14	.....	.....	.....
June.....	216	46	134	32	3	1	.....
July.....	96	36	47	11	1	.....	1
August.....	110	36	54	19	1	.....	.....
September.....	148	38	83	27	.....	.....	.....
October.....	158	44	90	22	2	.....	.....
November.....	127	45	69	11	.....	1	1
December.....	93	34	46	13	.....	.....	.....
Totals.....	1,400	420	759	208	8	3	2

* Outside of Boston.

Marriages by Clergymen and Civil Officials.

Of the cases where both parties were white 1,289 marriages were solemnized by clergymen and 81 by civil officials; of the marriages of colored people 27 were by clergymen and one by a justice of the peace; of the mixed marriages both were performed by clergymen.

Relative Ages of Grooms and Brides. (TABLE XXIV.)

The greatest number of grooms of any age period was 423 in the 25 to 29 year period; the greatest number of brides was 421 in the 21 to 24 year period; Table XXIV. shows the relative ages of the grooms and brides in these marriages.

The number of grooms who married at less than 25 years of age was 399; at less than 30 years, 822; at 30 years of age and more, 578.

The number of brides under 20 years of age was 151; less than 30 years, 1,072; at 30 years and more 328.

The greatest number of marriages in which both parties were of the same age period was 181 in the 25 to 29 year period.

TABLE XXIV.—OUT-OF-TOWN MARRIAGES: AGES OF GROOMS AND BRIDES (RELATIVE).

AGES OF GROOMS.	TOTAL GROOMS EACH AGE PERIOD.	AGES OF BRIDES.														
		14 Years.	16 Years.	17 Years.	18 Years.	19 Years.	20 Years.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 to 64.
17 years	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 "	11	1	1	.....	6	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
19 "	17	.....	.....	1	6	4	1	4	1	.....	.....	.....	.....	.....	.....	.....
20 "	28	.....	.....	4	5	9	4	5	1	.....	.....	.....	.....	.....	.....	.....
21 to 24 years	342	.....	2	7	27	46	56	161	39	4	.....	.....	.....	.....	.....	.....
25 to 29 "	423	.....	.....	4	6	10	32	164	181	22	4	.....	.....	.....	.....	.....
30 to 34 "	249	.....	1	1	3	3	4	61	103	54	16	3	.....	.....	.....	.....
35 to 39 "	148	.....	.....	.....	.....	1	4	16	52	40	28	7	.....	.....	.....	.....
40 to 44 "	80	.....	.....	.....	.....	.....	2	5	13	16	21	17	3	3	...	.....
45 to 49 "	45	.....	.....	.....	.....	.....	.....	2	5	12	11	8	4	2	1	...
50 to 54 "	22	.....	.....	.....	.....	.....	.....	1	2	2	5	6	3	3	...	.....
55 to 59 "	10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	3	1	2
60 to 64 "	15	.....	.....	.....	.....	.....	.....	.....	.....	1	1	5	2	2	3	1
65 to 69 "	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	3	...	1
Total brides of each age period,	1,400	1	4	18	53	75	103	421	397	153	86	48	16	16	5	4

Number of Marriage. (TABLE XXV.)

In 1,128 cases neither party had been previously married; in 1,203 cases the.grooms had not been previously married, and in 1,252 cases the brides were married for the first time; 125 widowers and 80 widows were married the second time; 8 widowers and 5 widows were married the third time; 60 divorced grooms and 60 divorced brides were married the second time and one divorced groom was married the third time.

TABLE XXV.—OUT-OF-TOWN MARRIAGES: NUMBER OF MARRIAGE (RELATIVE).

GROOMS.	TOTAL GROOMS.	BRIDES.			
		First.	Second, Widow.	Third, Widow.	Second, Divorced.
First.....	1,203	1,128	42	.....	33
Second, widowed.....	125	86	27	3	9
Third, widowed.....	8	2	3	1	2
Second, divorced.....	60	36	8	1	15
Third, divorced.....	1	.....	.....	.....	1
Total brides.....	1,397	1,252	80	5	60
Miscellaneous.....	3	.....	.....	.....	.....
Total.....	1,400	.....	.....	.....	.....

MISCELLANEOUS.

GROOMS.	BRIDES.	No.
Third, widowed and divorced.....	First.....	2
First.....	Second, annulled.....	1
	Total.....	3

Nativity of Grooms and Brides. (TABLE XXVI.)

Three hundred twenty-six grooms were natives of Boston and 586 were natives of the United States, exclusive of Boston, while 488 were natives of various foreign countries specified in the table; 235 brides were natives of Boston and 640 were natives of the United States, exclusive of Boston, while 525 were natives of various foreign countries specified in the table. The number of native-born grooms who married foreign-born brides was 180; the number of native-born brides who married foreign-born grooms was 143.

TABLE XXVI.—OUT-OF-TOWN MARRIAGES: RELATIVE NATIVITY OF GROOMS AND BRIDES.

BIRTHPLACE OF GROOMS.	BIRTHPLACE OF BRIDES.																			
	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	France.	Turkey.	Austria.	Portugal.	Holland.	Greece.	Denmark.	Cuba and West Indies.	All Other Coun- tries.	Unknown.
Boston.....	90	182	18	22	8	1	1	3	2	8	..	..	..	..	1	..	..	1	1	1
United States, out of Boston.....	103	357	20	72	17	3	..	1	..	1	..	..	..	..	..	..	..	..	1	..
Ireland.....	1	14	91	3	2	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..
British-American Provinces.....	21	43	6	68	4	..	..	..	..	2	..	..	..	..	1	..	1	..	..	..
Great Britain.....	8	19	5	10	13	2	..	1	..	4	1	..	1	..	..	..	..	..	..	..
Germany.....	1	3	2	1	..	..	13	1	..	..	..	..	3	..	..	..	..	..	..	..
Italy.....	3	7	1	..	1	..	..	46	2	..	..	..	..	2	..	..	..	..	..	..
Russia.....	..	1	..	..	..	1	..	1	..	17	1	12	1	3	..	..	..	..	..	..
Norway.....	..	1	1	..	..	1	..	1	2	..	..	..	..	..	..	..	..	..	..	..
Sweden.....	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
France.....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkey.....	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
Austria.....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Portugal.....	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..
Holland.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland.....	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	3	2	1	..
Greece.....	..	1	..	2	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..
Denmark.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuba and West Indies.....	1	3	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
All others.....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown.....	* 1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals.....	235	640	144	179	46	7	14	58	6	34	1	12	8	2	2	1	4	4	2	1

* At sea.

TABLE XXVII.—OUT-OF-TOWN MARRIAGES: NATIVITY OF GROOMS AND BRIDES AND NUMBER OF MARRIAGE.

GROOMS.	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	France.	Turkey.	Austria.	Portugal.	Holland.	Switzerland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
First.....	300	482	104	122	51	7	19	54	3	16	2	15	6	1	1	1	3	7	5	4	1
Second, widowed.....	20	62	7	15	6	1	2	4	...	6	...	...	1	1	...	...	...	...	...	...	...
Third, widowed.....	...	4	...	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Third, widowed and divorced.....	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Second, divorced.....	6	35	1	6	4	3	1	1	...	1	...	...	...	1	...	...	...	...	1	...	...
Third, divorced.....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	326	586	112	146	61	11	22	60	3	23	2	15	7	3	1	1	3	7	6	4	1
BRIDES.	First.....	216	559	141	157	38	6	14	6	30	1	12	8	2	2	...	1	4	4	2	...
	Second, widowed.....	7	42	3	15	4	...	6	...	3	...	...	...	...	...	...	...	...	...	...	...
	Second, annulled.....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Third, widowed.....	...	1	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Second, divorced.....	12	37	...	5	2	1	1	...	1	...	...	...	...	...	...	...	...	...	...	1
	Totals	235	640	144	179	46	7	14	58	6	34	1	12	8	2	2		1	4	4	2	1

TABLE XXVIII.—OUT-OF-TOWN MARRIAGES: AGE AND NATIVITY OF GROOMS.

AGE PERIOD.	Total Grooms.	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	France.	Turkey.	Austria.	Portugal.	Holland.	Switzerland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
17 years.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 ".....	11	3	4	.....	1	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 ".....	17	9	7	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20 ".....	28	10	10	.....	3	.....	.....	1	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21 to 24 years.....	342	95	133	11	31	18	3	7	23	.....	5	.....	5	2	1	1	.....	1	2	1	3	.....
25 to 29 ".....	423	98	162	44	46	16	2	7	19	1	8	.....	7	3	1	.....	.....	1	2	4	1	1
30 to 34 ".....	249	61	101	33	27	7	3	2	5	1	1	2	3	.....	.....	.....	.....	1	2	.....	.....	.....
35 to 39 ".....	148	26	71	18	18	8	.....	2	3	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
40 to 44 ".....	80	11	41	5	10	4	1	.....	3	1	3	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
45 to 49 ".....	45	7	23	.....	6	4	1	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....
50 to 54 ".....	22	4	13	1	1	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
55 to 59 ".....	10	1	4	.....	2	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 to 64 ".....	15	1	12	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65 to 69 ".....	9	.....	5	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Totals, each country	1,400	326	586	112	146	61	11	22	60	3	23	2	15	7	3	1	1	3	7	6	4	1

TABLE XXIX.—OUT-OF-TOWN MARRIAGES: AGE AND NATIVITY OF BRIDES.

AGE PERIOD.	Total Brides.	Boston.	United States, out of Boston.	Ireland.	British-Ameri- can Provinces.	Great Britain.	Germany.	Italy.	Russia.	Norway.	Sweden.	France.	Turkey.	Austria.	Portugal.	Holland.	Greece.	Denmark.	Cuba and West Indies.	All Other Countries.	Unknown.
14 years.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 ".....	4	1	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 ".....	18	5	7	.....	2	1	.....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
18 ".....	53	15	24	1	2	.....	.....	2	3	.....	2	.....	1	1	.....	1	.....	.....	.....	1	.....
19 ".....	75	22	31	3	4	1	.....	4	3	.....	3	.....	.....	2	1	.....	.....	.....	.....	1	.....
20 ".....	103	16	54	3	15	1	.....	1	6	.....	.....	.....	5	2	.....	.....	.....	.....	.....	.....	.....
21 to 24 years.....	421	76	182	36	50	14	3	4	29	.....	17	.....	3	3	.....	.....	1	2	1	.....	.....
25 to 29 ".....	397	47	182	72	55	15	1	1	9	5	2	.....	2	.....	.....	1	.....	2	3	.....	.....
30 to 34 ".....	153	27	69	17	22	7	1	.....	2	1	5	1	.....	.....	1	.....	.....	.....	.....	.....	.....
35 to 39 ".....	86	14	43	8	16	4	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40 to 44 ".....	48	6	25	4	7	1	1	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45 to 49 ".....	16	4	5	.....	3	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
50 to 54 ".....	16	.....	11	.....	3	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
55 to 59 ".....	5	.....	4	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 to 64 ".....	4	2	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each country.....	1,400	235	640	144	179	46	7	14	58	6	34	1	12	8	2	2	1	4	4	2	1

PLACE OF MARRIAGE.

The out-of-town marriages recorded in Boston were distributed by states and countries as follows:

Massachusetts	988	Pennsylvania	2
Rhode Island	310	Delaware	1
Connecticut	33	Georgia	1
Maine	19	Nova Scotia	2
New Hampshire	19	New Brunswick	1
Vermont	11	Prince Edward Island,	1
New York	11	France	1

OUT-OF-TOWN MARRIAGES, LIST OF OCCUPATIONS OF GROOMS,
1908.

Government, National.

Military service	4
Naval service	1
Department officials	2
Department clerks	7
Letter carriers	7

State.

Department clerk	1
Police	5
Mechanics	5

Professional.

Clergymen	6
Lawyers	13
Physicians and surgeons	20
Dentists	4
Veterinarian	1
Nurses	2
Journalist	1
Editors	2
Reporters	3
Architects	4
Artists (painting, drawing)	4
Musicians, not specified	7
Musicians, vocal	2
Actors	5
Miscellaneous entertainment	2
Instructors, school and college	2
Teachers, schools	11
Students, over 18 years	9
Draughtsmen	10

Domestic Service.

Hotel keepers	2
Stewards	3
Restaurant keepers	6
Cooks	7
Butlers	4
Waiters	8

Trade, Commerce and Finance.

Merchants and dealers	69
Peddlers and hawkers.	6
Bankers, brokers and business agents	34
Clerks	141
Salesmen	116
Shippers and packers	21
Foremen	9
Managers and buyers, etc.	33
Bookkeepers and accountants	33
Cashiers	5
Bank clerks, tellers, etc.	1
Messengers and porters, etc.	7
Miscellaneous	3
Builders	4
Contractors (not specified)	2

Transportation.

Teamsters and truckmen, etc.	61
Cab and coach drivers	13
Conductors, railroad (steam and electric)	19
Firemen	9
Brakemen	4
Motormen	11
Signalman	1
Starters	2
Inspectors	3
Freight handlers	7
Miscellaneous	6

Marine Occupations.

Sailors	5
Fishermen	6
Pilot	1
Engineer	1
Miscellaneous	1

Manual Labor.

Barbers and hairdressers	12
Bakers and confectioners	15

Blacksmiths	11
Boot and shoemakers and operators	27
Butchers	5
Brewers and distillers	3
Boilermakers	2
Bridge builders	3
Boxmakers	3
Bartenders and wine clerks	2
Bootblack	1
Brushmaker	1
Bookbinders	5
Boatmakers	2
Bottler	1
Cabinetmakers	2
Carpenters and joiners	29
Cigar and tobacco workers	2
Clock and watchmaker	1
Carriage painters	2
Carriage trimmer	1
Chemists and drug clerks	16
Chauffeurs	12
Coppersmiths	3
Coremakers	2
Cutters (?)	2
Dyer and dye worker	1
Designers	3
Engineers, not specified	14
Engineers (stationary)	5
Electricians	25
Electrotyper	1
Firemen, not specified	10
Firemen (stationary)	7
Florists	3
Farmers and farm laborers	10
Gardeners	7
Glassworker	1
Harnessmakers	2
Iron, steel and metal workers	15
Inspector, machines	1
Inspector (?)	1
Watchman	1
Janitors	11
Elevator men	2
Jeweler	1
Laborers	33
Laundry worker	1
Leather workers (not boots and shoes)	4
Mechanics (?)	5
Machinists	37
Marble and stone workers	2
Masons (brick and stone)	2

Mill and factory operators	18
Molders (?)	1
None	3
Oculist	1
Opticians	3
Piano and organ builders	5
Printers, compositors and pressmen	27
Painters, glaziers, decorators and gilders	14
Patternmakers	6
Plasterer and whitewasher.	1
Photographers	5
Plumbers	11
Picture framer	1
Paper rulers, cutters and workers	4
Rigger	1
Roofer	1
Retired	1
Rubber workers	5
Steam and gas fitters	11
Stable keepers	2
Stablemen	4
Stereotypers	2
Tailors	12
Tinwaremakers	2
Telegraph and telephone operators	12
Tileworker	1
Undertakers	2
Upholsterers	5
Woodworkers	9
Wheelwright.	1
Wireworkers	4
Electrical engineers	2
Civil engineers	5
Engineers, not specified	14
Building engineers	2
Mechanical engineers	5
Mining engineer	1
Operators (?)	2
Toolmakers	3
Bowling alley keepers	2
Elevator men	2

And one each of twenty-eight other trades and occupations not easily classified with the above list.

OUT-OF-TOWN MARRIAGES, OCCUPATIONS OF BRIDES, 1908.

Mercantile and commercial	161
Needle workers	55
Telephone and telegraph operators	9
Mill and factory operators	52
Waitresses	20

At home	275
Domestic occupations	165
Printers and compositors	4
None	471
School teachers	19
Housekeepers	46
Nurses	33
Musicians and teachers of music	9
Laundry workers	9
Milliners	12
Rubber workers	8
Candymakers	9
Photographers	2
Bookbinders	7
Actresses	4
Boxmakers	10
Missionaries	2
Governesses	2

And one each of sixteen trades or occupations not easily classified.

BIRTHS IN BOSTON IN 1908. (TABLE XXXI.)

The difference between the number of births as given in the columns for each consecutive year since 1849, in the appendix, and the number of births for each year, as given in each annual report is accounted for in several ways, the most notable reason being (for the years since 1890, especially) the result of the laws governing the age of children for admission to school, and the employment of children after reaching the age of 14 years, the requirement being a proof of the age from the public records. Many of the children have foreign-born parents, who are ignorant of the law requiring the registration of a birth, and in many cases there has been no officiating physician to make a proper return. When the certificate of birth is needed to establish the age of a child, if it is not upon the record of births it must be placed there (if sufficient authority can be presented to verify the parents' statement) before a certificate can be granted, hence the addition of many births to the record each year after the annual report has been compiled and distributed. The total number of recorded births for each year since 1849 has been corrected and taken from the actual number of recorded births upon the books, down to 1908, and will be found in the appendix.

There were 18,347 births registered in this office in 1908; there were 9,368 males and 8,979 females.

They may be classified generally, as regards the residence of the parents, as follows: Parents residing in Boston, ward residence known, 17,270; males, 8,816, females, 8,454; ward residence unknown, 105; 52 males, 53 females; born in Boston of nonresident parents, 949; males, 449, females, 450; parents' residence unknown, 128; males, 53, females, 75.

There were 637 stillborn infants which are not included in the above statement.

The birth rate of Boston based upon its estimated population and total number of births recorded irrespective of parents residence is 29.18 per thousand of population; if based upon the same estimate of population and the number of children born to residents of Boston it is 27.47 per thousand of population.

The greatest number of births for any ward was 1,888, in Ward 6, or 10.9 per cent of the whole number of births among residents of Boston.

The births of males exceeded those of females in all wards except Wards 1, 6, 8, 13, 17 and 18.

The greatest number of births for any month was recorded in July, 1,646; the least number was in February, 1,444.

The greatest number of male births in any month was in July, 842; the least number was in February, 731.

The greatest number of female births in any month was 807, in March; the least number in any month was 713, in February.

The greatest number of births for any quarter-year period was 4,669, in the third quarter of the year; the least number was 4,517, in the second quarter.

The greatest number of male births for any quarter of the year was 2,413, in the third quarter; the least number of male births for any quarter-year period was 2,312, in the first quarter of the year; the greatest number of female births for any quarter-year period was 2,256, in the third quarter of the year; the least number was 2,223, in the last quarter of the year.

Ward 5 is again credited with the least number of births for the year in any ward of the city.

TABLE XXX.—PERCENTAGE OF BIRTHS IN EACH WARD TO WHOLE NUMBER OF BIRTHS AND OF WARD POPULATION AND RATIO.

WARDS.	Population.	Births.	Per cent of Whole Number of Births.	Per cent of Ward Population.	One in Every
1.....	26,836	721	4.1	2.7	37
2.....	27,339	989	5.7	3.6	27
3.....	15,649	410	2.3	2.6	38
4.....	13,198	372	2.1	2.8	35
5.....	13,387	305	1.07	2.2	43
6.....	31,676	1,888	10.9	5.9	16
7.....	16,466	452	2.6	2.7	36
8.....	32,493	1,235	7.1	3.8	26
9.....	23,317	803	4.6	3.4	29
10.....	25,139	335	1.9	1.3	75
11.....	23,568	369	2.1	1.5	63
12.....	22,940	401	2.3	1.7	57
13.....	22,877	750	4.3	3.2	30
14.....	23,380	637	3.6	2.7	36
15.....	21,431	525	3+	2.4	40
16.....	23,128	556	3.2	2.4	41
17.....	25,642	715	4.1	2.7	35
18.....	23,380	610	3.5	2.6	38
19.....	30,859	747	4.3	2.4	41
20.....	44,119	1,054	6.1	2.3	41
21.....	28,030	549	3.1	1.9	51
22.....	29,287	718	4.1	2.4	40
23.....	27,905	617	3.5	2.2	45
24.....	33,435	757	4.3	2.2	44
25.....	23,002	650	3.7	2.8	35

COLORED BIRTHS.—ALL OTHER THAN WHITE.
(TABLE XXXII.)

There were 364 children born in this city whose parents (one or both) were colored, or 22 more than in 1907; of these, 343 had parents who were residents of this city, 177 males, 166 females; 18 were children of nonresident parents, 10 males, 8 females, and of 3, the parents residence was unknown.

The births of colored children was 1.9 per cent of the total

number of births recorded. The parents (the father or both) of 7 of these children were Chinese; there was 1 child of Indian parentage.

The greatest number of colored births for any month was in August, 41; the least number was in September, 24.

The greatest number of colored births to a ward was 130, in Ward 18; there were 65 of each sex.

There were no children of colored parentage born in Wards 2, 3, 6, 15, 21 and 23.

BIRTHS.—NATIVITY OF FATHERS AND MOTHERS.

(TABLES XXXIII., XXXIV. AND XXXV.)

Fathers.—Of the children born in Boston in 1908, 3,177 had fathers who were also born in Boston, and 3,052 had fathers who were born in the United States, exclusive of Boston, making 6,229 children who had native-born fathers, or 33.9 per cent of the total number of births recorded. There were 804 children whose fathers were unknown, or 4.3 per cent, and over 60 per cent of the children born in Boston in 1908 had foreign-born fathers.

Mothers.—Of the children born in Boston in 1908, 3,589 had mothers who were also born in Boston, and 2,965 had mothers who were born in the United States, outside of Boston, or 6,554 children who had native-born mothers, or 35.1 per cent of the total number of births recorded. About 65 per cent of the children born in Boston had foreign-born mothers.

Proportion of the Sexes to the Nativity of the Parents.

The children of American fathers were 3,148 males and 3,081 females; excess of males, 67.

The children of American-born mothers were 3,338 males and 3,216 females; excess of males, 122.

The children of American-born parents (both parents) were 2,330 males and 2,301 females; excess of males, 29.

The children of foreign-born fathers were 5,810 males and 5,504 females; excess of males, 306.

The children of foreign-born mothers were 6,015 males and 5,750 females; excess of males, 265.

The children of parents who were both foreign-born were 9,918; 5,073 males and 4,845 females; excess of males, 228.

The children of native fathers and foreign mothers were 1,585; 816 males and 769 females; excess of males, 47.

The children of native mothers and foreign fathers were 1,451; 777 males and 674 females; excess of males, 103.

Table XXXV. shows the relative nativity of the parents of all children born in Boston in 1908.

TABLE XXXI.—BIRTHS RECORDED IN BOSTON, 1908: BY
WARDS, SEX, MONTH AND SEASON.

WARDS.	TOTAL NUMBER.	Each Sex.		January.		February.		March.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	721	344	377	33	25	19	27	31	39
2.....	989	523	466	38	33	45	33	34	37
3.....	410	212	198	11	11	10	16	18	16
4.....	372	196	176	8	15	23	12	17	18
5.....	305	157	148	19	5	11	10	16	12
6.....	1,888	938	950	77	85	67	60	68	76
7.....	452	236	216	12	19	24	15	23	25
8.....	1,235	608	627	59	47	48	55	49	43
9.....	803	419	384	36	31	33	30	33	37
10.....	335	175	160	14	7	15	16	22	11
11.....	369	187	182	17	13	13	12	16	22
12.....	401	224	177	20	17	10	14	16	12
13.....	750	370	380	34	42	31	29	42	40
14.....	637	322	315	22	29	26	27	32	24
15.....	525	268	257	17	22	28	16	30	32
16.....	556	304	252	29	22	20	25	22	23
17.....	715	351	364	34	26	34	35	39	43
18.....	610	301	309	19	29	23	29	28	24
19.....	747	385	362	31	30	29	24	35	34
20.....	1,054	547	507	49	44	46	56	52	51
21.....	549	292	257	25	23	26	23	21	17
22.....	718	383	335	32	24	26	26	30	39
23.....	617	309	308	31	28	28	22	27	26
24.....	757	381	376	43	25	33	33	34	40
25.....	650	332	318	19	25	30	30	25	25
Ward unknown.....	105	52	53	1	4	3	4	5	7
Totals, each sex.....		8,816	8,454	730	681	701	679	765	773
Totals, both sexes.....	17,270	17,270		1,411		1,380		1,538	
Nonresidents.....	949	449	450	30	35	27	27	48	31
Residence unknown.....	128	53	75	4	9	3	7	4	3
Totals, each sex*.....		9,368	8,979	764	725	731	713	817	807
Totals, both sexes.....	*18,347	18,347		1,489		1,444		1,624	

* Including three, one male and two females, whose date of birth was unknown.

TABLE XXXI., *Continued.*—BIRTHS RECORDED IN BOSTON,
1908: BY WARDS, SEX, MONTH AND SEASON.

WARDS.	April.		May.		June.		July.		August.		September.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	26	19	36	34	27	41	33	32	24	30	32	31
2.....	49	46	33	37	51	32	50	47	42	51	41	33
3.....	16	14	10	15	18	15	28	22	24	18	20	19
4.....	13	13	12	13	13	19	17	19	13	18	24	10
5.....	6	9	8	12	15	15	12	11	14	7	17	21
6.....	68	79	87	73	88	76	75	88	98	78	70	79
7.....	24	11	20	24	16	18	24	17	22	15	17	19
8.....	49	56	46	65	48	45	47	54	60	47	54	52
9.....	24	32	44	38	50	23	35	40	31	38	33	29
10.....	16	11	9	12	11	20	15	20	10	13	14	12
11.....	11	10	14	14	16	14	17	5	16	20	10	17
12.....	17	20	17	16	15	15	22	14	19	8	28	16
13.....	36	23	28	33	34	33	27	33	28	22	31	29
14.....	19	18	30	31	25	17	26	30	27	31	38	28
15.....	27	27	24	30	20	17	29	19	24	19	16	20
16.....	30	27	20	17	33	18	36	36	24	15	24	17
17.....	28	32	30	40	21	18	24	33	25	30	33	29
18.....	34	34	23	24	30	20	39	26	25	30	20	30
19.....	30	31	37	33	23	33	39	25	34	31	32	24
20.....	50	35	39	34	52	47	36	44	47	28	45	40
21.....	20	22	31	30	28	26	21	21	18	22	25	24
22.....	25	21	29	24	32	27	34	30	46	32	34	31
23.....	15	24	28	27	26	22	26	34	21	31	25	26
24.....	23	29	35	35	27	45	43	26	28	29	27	25
25.....	30	30	36	22	25	30	35	19	24	30	22	17
Ward unknown.....	4	5	10	5	7	8	7	5	2	3	1	1
Totals, each sex.....	690	679	736	738	751	694	797	750	746	696	733	679
Totals, both sexes.....	1,368		1,474		1,445		1,547		1,442		1,412	
Nonresidents.....	51	41	50	48	32	38	43	46	48	38	35	31
Residence unknown..	5	5	9	9	....	2	2	8	4	4	5	4
Totals, each sex.....	746	724	795	795	783	734	842	804	798	738	773	714
Totals, both sexes....	1,470		1,590		1,517		1,646		1,536		1,487	

TABLE XXXI., *Continued.*—BIRTHS RECORDED IN BOSTON,
1908: BY WARDS, SEX, MONTH AND SEASON.

WARDS.	October.		November.		December.		First Quarter, Jan., Feb., Mar.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	35	36	25	31	22	31	83	91
2.....	51	40	40	35	49	42	117	103
3.....	25	19	21	19	11	14	39	43
4.....	17	11	25	13	14	15	48	45
5.....	11	16	12	14	16	16	46	27
6.....	85	92	79	84	76	80	212	221
7.....	24	16	18	14	12	23	59	59
8.....	45	56	52	53	51	54	156	145
9.....	29	23	37	32	34	31	102	98
10.....	12	12	18	11	19	15	51	34
11.....	21	17	22	18	14	20	46	47
12.....	11	14	23	11	26	20	46	43
13.....	27	28	27	37	25	31	107	111
14.....	26	27	26	26	25	27	80	80
15.....	17	19	19	15	17	21	75	70
16.....	17	19	31	14	18	19	71	70
17.....	35	25	21	29	27	24	107	104
18.....	19	22	25	22	16	19	70	82
19.....	32	33	33	34	30	30	95	88
20.....	45	54	38	33	48	41	147	151
21.....	19	17	28	13	30	19	72	63
22.....	25	23	36	29	34	29	88	89
23.....	24	23	30	18	28	27	86	76
24.....	24	39	35	28	29	22	110	98
25.....	28	22	30	38	28	30	74	80
Ward unknown.....	6	6	5	4	1	1	9	15
Totals, each sex.....	710	709	756	675	700	701	2,196	2,133
Totals, both sexes.....	1,419		1,431		1,401		4,329	
Nonresidents.....	47	46	50	37	38	31	105	93
Residence unknown.....	4	6	3	3	10	15	11	19
Totals, each sex.....	761	761	809	715	748	747	2,312	2,245
Totals, both sexes.....	1,522		1,524		1,495		4,557	

TABLE XXXI., *Concluded*.—BIRTHS RECORDED IN BOSTON, 1908: BY WARDS, SEX, MONTH AND SEASON.

WARDS. -	Second Quarter, April, May, June.		Third Quarter, July, Aug., Sept.		Fourth Quarter, Oct., Nov., Dec.	
	Males.	Females.	Males.	Females.	Males.	Females.
1.....	89	94	89	93	82	98
2.....	133	115	133	131	140	117
3.....	44	44	72	59	57	52
4.....	38	45	54	47	56	39
5.....	29	36	43	39	39	46
6.....	243	228	243	245	240	256
7.....	60	53	63	51	54	53
8.....	143	166	161	153	148	163
9.....	118	93	99	107	100	86
10.....	36	43	39	45	49	38
11.....	41	38	43	42	57	55
12.....	49	51	69	38	60	45
13.....	98	89	86	84	79	96
14.....	74	66	91	89	77	80
15.....	71	74	69	58	53	55
16.....	83	62	84	68	66	52
17.....	79	90	82	92	83	78
18.....	87	78	84	86	60	63
19.....	90	97	105	80	95	97
20.....	141	116	128	112	131	128
21.....	79	78	64	67	77	49
22.....	86	72	114	93	95	81
23.....	69	73	72	91	82	68
24.....	85	109	98	80	88	89
25.....	91	82	81	66	86	90
Ward unknown.....	21	18	10	9	12	11
Totals, each sex.....	2,177	2,110	2,276	2,125	2,166	2,085
Totals, both sexes.....	4,287		4,401		4,251	
Nonresidents.....	133	127	126	115	135	114
Residence unknown.....	14	16	11	16	17	24
Totals, each sex.....	2,324	2,253	2,413	2,256	2,318	2,223
Totals, both sexes.....	4,517		4,669		4,541	

TABLE XXXII.—COLORED BIRTHS IN BOSTON, 1908: BY WARDS, MONTHS AND SEX.

WARDS.	TOTAL BIRTHS.	Each Sex.		January.		February.		March.		April.		May.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
2.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.....	6	6	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....
5.....	1	.....	*1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7.....	14	{*1 7}	{*2 4}	.....	.....	.....	2	1	.....	1	*1	.....	.....
8.....	8	3	5	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
9.....	29	18	11	.....	1	1	.....	1	1	.....	1	5	.....
10.....	42	20	22	4	.....	3	3	.....	1	1	1	2	1
11.....	22	14	{†1 7}	2	.....	.....	.....	1	.....	1	.....	.....	2
12.....	31	13	18	1	2	.....	2	1	1	.....	1	.....	1
13.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
14.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17.....	22	10	12	1	1	.....	2	1	3	.....	1	2	2
18.....	130	{*2 63}	65	5	3	4	6	3	2	6	10	{*1 4}	8
19.....	3	3	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....
20.....	4	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
21.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22.....	11	4	7	1	1	.....	.....	.....	1	1	.....	.....	.....
23.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24.....	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
25.....	8	3	5	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Ward unknown.....	5	4	1	1	.....	.....	.....	2	.....	.....	.....	1	.....
Totals, each sex.....	.....	{*3 174}	{*3 †1 162}	16	8	10	15	13	11	10	{*1 14}	{*1 15}	16
Totals, both sexes.....	343	343	.....	24	.....	25	.....	24	.....	25	.....	32	.....
Nonresidents.....	18	10	{*1 7}	.....	1	.....	.....	1	*1	2	1	1	1
Residence unknown...	3	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, each sex.....	.....	{*3 185}	{*4 †1 171}	16	9	10	15	14	{*1 11}	12	{*1 15}	{*1 16}	17
Totals, both sexes.....	364	364	.....	25	.....	25	.....	26	.....	28	.....	34	.....

* Chinese.

† Indian.

TABLE XXXII., *Concluded*.—COLORED BIRTHS IN BOSTON, 1908:
BY WARDS, MONTHS AND SEX.

WARDS.	June.		July.		August.		September.		October.		November.		December.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1.....														
2.....														
3.....														
4.....	1		1		1									
5.....		*1												
6.....														
7.....		{*1 1}			{*1 2}		1		1		1	1		
8.....	1	1			1			1					1	2
9.....	3	1	3		2		2	1			1	1	3	2
10.....	3	2	3		2	3			1	1	2	2	2	5
11.....	2	2	2		1	{†1 1}	2		2		1	2		
12.....		3	3	2	2			3	1	1	3	1	2	1
13.....														
14.....			1											
15.....														
16.....						1								
17.....			1	1	1	1	1	1	1				2	
18.....	7	4	8	3	{*1 3}	10	5	4	6	8	9	3	3	4
19.....							1							
20.....										1				1
21.....														
22.....			1	1	1	2				1				1
23.....														
24.....					1						1			
25.....				1	1	1			2	2				
Ward unknown...		1												
Totals, each sex..	17	{*2 15}	17	14	{*2 18}	{†1 19}	12	10	14	14	19	10	13	16
Totals, both sexes.	34		31		40		22		28		29		29	
Nonresidents.....	1		1	1	1			1			2	1	1	1
Residence un- known.....		1		1			1							
Totals, each sex..	18	{*2 16}	18	16	{*2 19}	{†1 19}	13	11	14	14	21	11	14	17
Totals, both sexes.	36		34		41		24		28		32		31	

TABLE XXXIII.—BIRTHS RECORDED IN BOSTON IN 1908: NATIVITY OF FATHERS BY COUNTRY OF BIRTH. BIRTHS BY WARDS AND SEX.

BIRTHPLACES.	NUMBER OF FATHERS.	Number of Children, Each Sex.		WARDS.							
				1		2		3		4	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	3,177	1,592	1,585	88	80	75	71	59	61	50	48
United States, outside of Boston.....	3,052	1,556	1,496	42	56	21	29	27	26	34	26
Ireland	2,511	1,300	1,211	19	27	30	28	75	71	51	57
Br.-American Provinces...	1,631	842	789	69	99	86	61	25	21	36	18
Great Britain.....	616	320	296	17	14	7	18	8	6	9	10
Germany.....	246	124	122	3	6	3	1	2	.....	.....	1
Italy.....	2,685	1,377	1,308	49	34	179	157	6	3	2	7
Russia.....	2,553	1,285	1,268	28	39	79	71	2	3	4	1
Norway.....	70	36	34	2	3	8	4	1	1	.....	.....
Sweden.....	292	141	151	4	4	11	8	1	1	.....	.....
China.....	5	2	3	.....	.....	.....	.....	.....	.....	.....	.....
France.....	28	12	16	.....	.....	2	.....	.....	.....	.....	.....
Turkey.....	176	91	85	.....	1	2	1	3	2	.....	1
Austria.....	166	99	67	1	.....	4	2	1	.....	1	1
Portugal.....	63	34	29	11	6	6	8	.....	1	1	1
Holland.....	11	7	4	.....	.....	.....	.....	.....	.....	.....	.....
Belgium.....	24	8	16	.....	.....	.....	.....	.....	.....	.....	.....
Switzerland.....	12	10	2	.....	.....	1	.....	.....	.....	.....	.....
Greece.....	33	18	15	.....	.....	.....	.....	.....	.....	.....	.....
Denmark.....	60	30	30	2	3	2	2	.....	.....	.....	.....
Cuba and West Indies.....	66	40	26	.....	.....	1	.....	.....	.....	1	1
All other countries.....	66	34	32	3	1	.....	1	.....	1	.....	.....
Unknown.....	804	410	394	6	4	6	4	2	1	7	4
Total children, each sex.....	.....	9,368	8,979	344	377	523	466	212	198	196	176
Total children, both sexes..	18,347	18,347	.....	721	.....	989	.....	410	.....	372	.....

TABLE XXXIII., *Continued*.—BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF FATHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.											
	5		6		7		8		9		10	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	40	31	11	16	18	19	14	19	45	50	12	18
United States, outside of Boston.....	22	26	5	7	27	18	28	22	61	56	67	61
Ireland.....	67	62	3	6	19	16	16	12	29	22	29	25
Br.- American Provinces,	13	14	2	2	9	3	13	13	15	14	16	12
Great Britain.....	1	8	.....	1	7	2	7	6	14	7	8	3
Germany.....	.....	.....	2	.....	.....	2	1	4	7	1	1	2
Italy.....	9	4	765	782	46	45	96	90	35	49	10	7
Russia.....	.....	.....	105	106	31	29	395	429	179	162	5	7
Norway.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	1
Sweden.....	.....	.....	1	2	1	.....	.....	.....	2	3	2	.....
China.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	.....
France.....	.....	.....	.....	.....	1	2	.....	.....	1	1	4	1
Turkey.....	.....	.....	1	.....	53	54	1	.....	5	1	.....	1
Austria.....	1	.....	22	10	5	4	17	17	11	3	.....	.....
Portugal.....	.....	.....	7	2	.....	.....	1	.....	.....	.....	.....	.....
Holland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Belgium.....	.....	1	.....	.....	1	2	.....	.....	1	1	.....	.....
Switzerland.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	1
Greece.....	.....	.....	2	4	7	3	.....	.....	.....	.....	2	1
Denmark.....	1	.....	.....	.....	.....	1	.....	1	.....	.....	.....	1
Cuba and West Indies...	.....	1	.....	.....	.....	1	.....	2	1	.....	5	3
All other countries.....	.....	1	4	4	5	3	8	3	3	1	1	2
Unknown.....	3	.....	6	7	4	10	*11	9	10	*12	11	14
Total children, each sex..	157	148	938	950	236	216	608	627	419	384	175	160
Total children, both sexes.	305		1,888		452		1,235		803		335	

* At sea.

TABLE XXXIII., *Continued*.— BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF FATHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES. *	WARDS.											
	11		12		13		14		15		16	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	25	24	27	25	55	57	85	99	73	80	99	74
United States, outside of Boston.....	34	38	79	63	27	19	56	37	35	35	41	45
Ireland.....	5	12	21	21	172	171	82	59	67	67	39	27
Br.-American Provinces..	4	7	23	19	16	21	24	41	30	22	39	34
Great Britain.....	3	8	9	9	7	11	14	15	14	8	12	13
Germany.....	2	2	1	5	2	3	2	7	8	2	3	5
Italy.....	6	3	15	4	15	11	23	15	9	7	25	7
Russia.....	83	72	11	4	64	76	13	14	19	11	27	20
Norway.....		2	2			1	1	3			2	3
Sweden.....		1	4	8	2	1	5	11	2	4	11	8
China.....												
France.....							1			3		4
Turkey.....	2		4	2				1				
Austria.....	4	3			3	1	1		5	5		3
Portugal.....		2			1	1	4			3		
Holland.....								2	1			
Belgium.....						1	5	5		4		1
Switzerland.....												
Greece.....	1	1		1								
Denmark.....			2		1	1	1	1		1	2	1
Cuba and West Indies...	4	1	4	1			1			1		
All other countries.....		2					1				1	2
Unknown.....	14	4	22	15	5	5	3	5	5	4	3	5
Total children, each sex..	187	182	224	177	370	380	322	315	268	257	304	252
Total children, both sexes,	369		401		750		637		525		556	

TABLE XXXIII., *Continued*.—BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF FATHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.											
	17		18		19		20		21		22	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	78	92	56	59	93	75	160	155	69	65	79	72
United States, outside of Boston.....	62	63	72	82	55	60	145	151	83	69	78	76
Ireland.....	90	75	43	48	122	118	63	52	24	14	58	48
Br.-American Provinces..	46	54	25	21	30	33	63	58	32	38	42	39
Great Britain.....	17	13	8	9	17	14	28	16	15	12	21	21
Germany.....	4	6	5	9	14	11	7	1	9	4	23	22
Italy.....	10	16	6	7	10	7	9	7	4	4	10	5
Russia.....	24	20	31	37	13	16	38	41	29	24	26	23
Norway.....	2	3			1		3	3	3	1	5	2
Sweden.....	4	8	17	9	6	11	13	10	5	12	17	12
China.....												
France.....					2	1			1			1
Turkey.....			2	5	4			1	1		4	2
Austria.....	1	3	2		5	4	1	1	4	5	4	3
Portugal.....				2			1	1			1	
Holland.....	1		2		1					1	2	
Belgium.....												1
Switzerland.....			1		1						3	1
Greece.....		1			2	1			1			
Denmark.....	1	1	2		1	3	1	2		2	4	1
Cuba and West Indies...	2		15	9	1			1			1	
All other countries.....	1		2	1	1	1	2	2		1		3
Unknown.....	8	9	12	11	6	7	13	5	12	5	5	3
Total children, each sex..	351	364	301	309	385	362	547	507	292	257	383	335
Total children, both sexes,	715		610		747		1,054		549		718	

TABLE XXXIII., *Concluded*.— BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF FATHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.								Non-residents.		Residence Unknown.	
	23		24		25		Unknown.					
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	84	96	100	91	55	62	2	6	40	39	.....	1
United States, outside of Boston.....	69	68	115	117	82	88	8	5	179	152	2	1
Ireland.....	54	49	47	48	55	53	2	.....	18	23	.....	.....
Br.-American Provinces..	30	30	67	49	45	35	1	1	38	29	3	1
Great Britain.....	22	18	18	19	25	13	.....	1	12	20	.....	1
Germany.....	12	18	2	7	5	2	.....	.....	6	.....	.....	1
Italy.....	6	11	6	4	11	14	2	1	13	7	.....	.....
Russia.....	5	2	5	7	36	32	2	.....	28	21	3	1
Norway.....	2	1	2	3	.....	.....	.....	.....	.....	2	.....	.....
Sweden.....	10	8	11	17	5	5	.....	1	7	6	.....	1
China.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
France.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Turkey.....	.....	.....	1	2	1	5	.....	.....	7	5	.....	1
Austria.....	3	.....	.....	.....	2	.....	.....	.....	1	2	.....	.....
Portugal.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Holland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgium.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switzerland.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greece.....	.....	.....	1	3	.....	.....	.....	.....	2	.....	.....	.....
Denmark.....	3	1	2	4	3	4	1	.....	.....	.....	1	.....
Cuba and West Indies...	.....	.....	1	.....	.....	1	.....	.....	3	3	.....	1
All other countries.....	.....	1	.....	2	1	.....	.....	.....	1	.....	.....	.....
Unknown.....	8	4	2	3	6	4	34	38	142	136	44	66
Total children, each sex..	309	303	381	376	332	318	52	53	499	450	53	75
Total children, both sexes,	617		757		650		105		949		128	

TABLE XXXIV.—BIRTHS RECORDED IN BOSTON IN 1908: NATIVITY OF MOTHERS BY COUNTRY OF BIRTH. BIRTHS BY WARDS AND SEX.

BIRTHPLACES.	NUMBER OF MOTHERS.	Number of Children, Each Sex.		WARDS.							
				1		2		3		4	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	3,589	1,814	1,775	94	106	86	75	60	50	61	56
United States, outside of Boston.....	2,965	1,524	1,441	52	38	28	24	25	38	32	25
Ireland.....	3,085	1,616	1,469	32	37	41	35	83	79	54	60
Br.-American Provinces....	1,881	954	927	66	94	84	64	22	15	37	16
Great Britain.....	545	261	284	13	11	6	16	6	6	6	6
Germany.....	215	119	96	1	4	2	2	2	1	.....	.....
Italy.....	2,538	1,284	1,254	42	30	164	155	5	3	2	6
Russia.....	2,492	1,255	1,237	25	40	75	71	3	2	4	.....
Norway.....	71	39	32	2	3	4	5	1	.....	.....	.....
Sweden.....	325	157	168	4	5	13	7	1	.....	.....	3
China.....	3	1	2	.....	.....	.....	.....	.....	.....	.....	.....
France.....	23	12	11	.....	.....	.....	.....	.....	.....	.....	.....
Turkey.....	168	83	85	.....	1	2	1	3	2	.....	1
Austria.....	165	98	67	2	.....	6	2	.....	.....	.....	1
Portugal.....	51	27	24	8	6	7	8	.....	1	.....	1
Holland.....	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....
Belgium.....	24	7	17	.....	.....	.....	.....	.....	.....	.....	.....
Switzerland.....	14	11	3	.....	.....	.....	.....	.....	.....	.....	.....
Greece.....	30	16	14	.....	.....	.....	.....	.....	.....	.....	.....
Denmark.....	39	19	20	2	2	3	1	.....	.....	.....	.....
Cuba and West Indies....	48	32	16	.....	.....	.....	.....	.....	.....	.....	1
All other countries.....	45	22	23	.....	.....	2	.....	.....	1	.....	.....
Unknown.....	28	15	13	1	.....	.....	.....	1	.....	.....	.....
Total children, each sex...	.....	9,368	8,979	344	377	523	466	212	198	196	176
Total children, both sexes,	18,347	18,347		721		989		410		372	

TABLE XXXIV., *Continued.*— BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF MOTHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.											
	5		6		7		8		9		10	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	36	32	29	31	26	23	24	23	53	57	16	20
United States, outside of Boston.....	17	21	11	5	14	14	19	29	47	47	54	58
Ireland.....	75	67	6	9	30	20	24	14	54	33	43	31
Br.-American Provinces..	13	14	5	8	16	9	16	16	20	22	27	21
Great Britain.....	4	9	.....	2	7	6	10	7	11	10	5	7
Germany.....	2	.....	.....	.....	.....	3	.....	3	6	2	1	2
Italy.....	8	4	743	769	41	44	93	83	31	43	7	6
Russia.....	.....	.....	106	101	31	29	399	426	176	158	2	7
Norway.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	1
Sweden.....	2	.....	2	1	1	1	.....	1	.....	3	4	1
China.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	.....
France.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	4	2
Turkey.....	.....	.....	.....	.....	50	55	1	.....	5	1	.....	.....
Austria.....	.....	.....	24	13	5	2	16	18	11	2	2	1
Portugal.....	.....	.....	7	2	.....	1	.....	.....	.....	.....	.....	.....
Holland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgium.....	.....	1	.....	.....	1	1	.....	.....	.....	2	.....	.....
Switzerland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
Greece.....	.....	.....	2	4	6	3	.....	.....	.....	.....	2	.....
Denmark.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	1	.....
Cuba and West Indies...	.....	.....	.....	.....	3	1	.....	.....	.....	.....	4	1
All other countries.....	.....	.....	3	3	4	2	5	5	2	1	.....	.....
Unknown.....	.....	.....	.....	1	.....	.....	1	.....	1	1	.....	.....
Total children, each sex..	157	148	938	950	236	216	608	627	419	384	175	160
Total children, both sexes.	305		1,888		452		1,235		803		335	

TABLE XXXIV., *Continued*.—BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF MOTHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.											
	11		12		13		14		15		16	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	24	23	46	33	68	73	95	86	79	95	101	84
United States, outside of Boston.....	43	40	64	63	20	18	47	41	30	30	42	33
Ireland.....	9	16	31	34	185	171	82	71	83	67	51	39
Br.-American Provinces..	10	11	27	18	10	14	36	45	27	23	41	35
Great Britain.....	3	7	9	6	5	14	14	20	7	7	6	10
Germany.....	2	2	1	3	3	2	3	4	9	4	1	3
Italy.....	2	3	14	3	14	10	17	14	7	8	24	6
Russia.....	84	72	12	4	59	74	13	12	17	7	25	22
Norway.....	1	1	1	.....	.....	.....	2	1	.....	.....	3	2
Sweden.....	1	.....	10	9	.....	1	7	12	1	5	8	10
China.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
France.....	1	.....	.....	.....	.....	.....	1	1	.....	.....	.....	2
Turkey.....	2	.....	2	1	.....	.....	.....	1	.....	.....	.....	.....
Austria.....	2	2	.....	.....	3	2	.....	.....	6	4	.....	2
Portugal.....	.....	2	.....	.....	2	1	.....	.....	.....	1	.....	.....
Holland.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Belgium.....	.....	.....	.....	.....	.....	.....	5	6	.....	4	.....	.....
Switzerland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greece.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Denmark.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1	1	2
Cuba and West Indies...	3	.....	3	1	1	.....	.....	.....	.....	.....	.....	.....
All other countries.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1	1	1
Unknown.....	.....	.....	*1	1	.....	.....	.....	.....	1	.....	.....	1
Total children, each sex..	187	182	224	177	370	380	322	315	268	257	304	252
Total children, both sexes,	369		401		750		637		525		556	

* At sea.

TABLE XXXIV., *Continued.*—BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF MOTHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.											
	17		18		19		20		21		22	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	87	102	62	69	88	76	185	168	94	72	86	88
United States, outside of Boston.....	57	54	58	72	61	43	143	127	68	60	70	61
Ireland.....	103	89	56	69	135	133	66	63	33	23	69	64
Br.-American Provinces..	44	55	36	24	31	42	70	70	42	43	39	45
Great Britain.....	12	13	14	7	13	14	15	14	9	11	23	13
Germany.....	3	3	6	4	15	13	5	2	6	4	28	14
Italy.....	9	14	5	6	8	4	5	6	2	2	9	5
Russia.....	22	21	33	37	13	15	29	36	24	20	26	22
Norway.....	3	4	.....	1	1	1	4	2	3	1	3	1
Sweden.....	6	6	16	8	6	11	15	12	4	14	17	13
China.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
France.....	.....	.....	.....	.....	.....	1	.....	.....	2	1	1	.....
Turkey.....	.....	.....	2	5	4	.....	.....	1	.....	.....	4	2
Austria.....	2	2	1	.....	3	4	4	1	4	4	3	3
Portugal.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Holland.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Belgium.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Switzerland.....	.....	.....	.....	.....	3	.....	1	.....	.....	.....	.....	1
Greece.....	.....	1	.....	.....	2	1	.....	.....	1	.....	.....	.....
Denmark.....	.....	.....	.....	.....	.....	4	1	1	.....	1	3	.....
Cuba and West Indies...	2	.....	11	7	1	.....	.....	.....	.....	.....	1	.....
All other countries.....	1	.....	1	.....	.....	.....	1	2	.....	1	1	1
Unknown.....	.....	.....	.....	.....	.....	.....	2	*2	.....	.....	.....	.....
Total children, each sex..	351	364	301	309	385	362	547	507	292	257	383	335
Total children, both sexes,	715		610		747		1,054		549		718	

* At sea.

TABLE XXXIV., *Concluded*.—BIRTHS RECORDED IN BOSTON IN 1908:
NATIVITY OF MOTHERS BY COUNTRY OF BIRTH. BIRTHS BY
WARDS AND SEX.

BIRTHPLACES.	WARDS.								Non-residents.		Residence Unknown.	
	23		24		25		Unknown.					
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston	84	85	92	117	55	57	13	19	61	47	9	8
United States, outside of Boston	65	61	101	102	86	76	12	12	244	227	14	22
Ireland	63	66	67	55	74	64	6	6	52	41	9	13
Br.-American Provinces . .	33	38	82	49	44	50	13	6	53	65	10	15
Great Britain	21	17	14	12	14	11	.....	5	13	17	1	6
Germany	14	14	1	5	2	1	.....	.....	6	1	.....	.....
Italy	6	10	4	2	10	13	2	2	10	3	.....	.....
Russia	5	2	3	8	36	31	2	.....	28	18	3	2
Norway	2	2	3	4	1	.....	.....	.....	3	1	1	1
Sweden	10	7	11	13	5	8	1	2	11	12	1	3
China . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
France . . . . .	.....	2	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Turkey . . . . .	.....	.....	1	1	1	5	.....	.....	6	7	.....	1
Austria . . . . .	.....	2	.....	.....	1	.....	1	.....	2	2	.....	.....
Portugal . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....
Holland . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgium . . . . .	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Switzerland	4	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Greece . . . . .	.....	.....	1	3	.....	.....	.....	.....	1	1	.....	.....
Denmark	2	1	.....	2	1	2	.....	.....	1	.....	1	.....
Cuba and West Indies . . .	.....	.....	1	2	.....	.....	1	.....	1	2	.....	1
All other countries . . . .	.....	.....	.....	1	1	.....	.....	.....	.....	2	.....	.....
Unknown . . . . .	.....	.....	.....	.....	.....	.....	1	1	3	3	3	3
Total children, each sex . .	309	308	381	376	332	318	52	53	499	450	53	75
Total children, both sexes,	617		757		650		105		949		128	

TABLE XXXV.— NATIVITY (RELATIVE) OF FATHERS AND MOTHERS OF CHILDREN BORN IN BOSTON IN 1908.

BIRTHPLACES OF FATHERS.	NUMBER OF FATHERS OF EACH NATIVITY.	BIRTHPLACES OF MOTHERS.							
		Number of Children of Each Sex.		Boston.		United States, Outside of Boston.		Ireland.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston	3,177	1,592	1,585	867	888	341	318	164	165
United States, outside of Boston	3,052	1,556	1,496	412	419	710	676	134	120
Ireland	2,511	1,300	1,211	101	106	52	46	1,095	1,000
Br.-American Provinces . .	1,631	842	789	159	136	131	121	74	72
Great Britain	616	320	296	61	49	58	50	46	34
Germany	246	124	122	19	17	17	15	6	12
Italy	2,685	1,377	1,308	54	35	22	11	9	6
Russia	2,553	1,285	1,268	22	19	14	13	6	2
Norway	70	36	34	3	2	1	4	3	.....
Sweden	292	141	151	6	4	5	5	5	2
China	5	2	3	1	.....	.....	.....	.....	.....
France	28	12	16	1	3	.....	2	1	1
Turkey	176	91	85	1	.....	1	2	1	1
Austria	166	99	67	5	1	2	3	1	1
Portugal	63	34	29	7	4	5	3	1	1
Holland	11	7	4	1	.....	2	1	.....	.....
Belgium	24	8	16	.....	3	2	.....	.....	1
Switzerland	12	10	2	1	.....	1	.....	.....	.....
Greece	33	18	15	.....	.....	.....	1	.....	.....
Denmark	60	30	30	3	1	3	3	6	.....
Cuba and West Indies . . .	66	40	26	1	2	11	5	1	4
All other countries	66	34	32	3	1	1	6	2	1
Unknown	804	410	394	86	85	145	156	61	46
Total children, each sex . . . . .	.....	9,368	8,979	1,814	1,775	1,524	1,441	1,616	1,469
Total children, both sexes,	18,347	18,347		3,589		2,965		3,085	

TABLE XXXV., *Continued.*—NATIVITY (RELATIVE) OF FATHERS AND MOTHERS OF CHILDREN BORN IN BOSTON IN 1908.

BIRTHPLACES OF FATHERS.	BIRTHPLACES OF MOTHERS.									
	British-American Provinces.		Great Britain.		Germany.		Italy.		Russia.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	136	140	43	43	13	13	2	5	7	4
United States, outside of Boston.....	210	194	41	56	14	5	.....	1	12	7
Ireland.....	29	33	19	22	1	1	.....	.....	.....	.....
Br.-American Provinces...	451	430	19	22	1	1	.....	.....	.....	1
Great Britain.....	38	52	102	101	2	.....	.....	.....	3	5
Germany.....	4	4	2	5	64	58	.....	.....	6	4
Italy.....	7	5	3	1	.....	2	1,278	1,244	.....	1
Russia.....	.....	.....	10	10	8	10	.....	.....	1,196	1,188
Norway.....	.....	1	.....	1	.....	1	.....	.....	.....	.....
Sweden.....	3	4	4	2	.....	2	.....	.....	4	3
China.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
France.....	3	3	1	.....	1	.....	1	.....	.....	1
Turkey.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....
Austria.....	.....	.....	2	2	5	.....	.....	.....	14	14
Portugal.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holland.....	.....	.....	2	1	.....	.....	.....	.....	.....	1
Belgium.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Switzerland.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....
Greece.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Denmark.....	2	.....	2	.....	.....	1	.....	.....	.....	.....
Cuba and West Indies....	3	2	.....	1	1	.....	.....	.....	.....	.....
All other countries.....	2	1	2	.....	.....	2	.....	.....	5	4
Unknown.....	64	58	7	16	6	.....	3	4	6	4
Total children, each sex...	954	927	261	284	119	96	1,284	1,254	1,255	1,237
Total children, both sexes,	1,881		545		215		2,538		2,492	

TABLE XXXV., *Continued.*—NATIVITY (RELATIVE) OF FATHERS AND MOTHERS OF CHILDREN BORN IN BOSTON IN 1908.

BIRTHPLACES OF FATHERS.	BIRTHPLACES OF MOTHERS.									
	Norway.		Sweden.		China.		France.		Turkey.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	1	1	5	2	.....	.....	1	.....	.....	.....
United States outside of Boston.....	3	2	9	5	.....	.....	2	2	.....	.....
Ireland.....	.....	.....	1	2	.....	.....	1	.....	.....	.....
Br.-American Provinces.....	1	.....	4	5	.....	.....	.....	.....	.....	.....
Great Britain.....	2	.....	3	3	.....	.....	.....	.....	.....	.....
Germany.....	1	1	2	1	.....	.....	.....	2	.....	.....
Italy.....	.....	.....	1	1	.....	.....	.....	2	.....	.....
Russia.....	2	.....	2	4	.....	.....	3	.....	.....	1
Norway.....	20	21	8	2	.....	.....	.....	.....	.....	.....
Sweden.....	5	5	107	122	.....	.....	.....	.....	.....	.....
China.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....
France.....	.....	.....	.....	.....	.....	.....	4	5	.....	.....
Turkey.....	.....	.....	.....	.....	.....	.....	.....	.....	82	82
Austria.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Portugal.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgium.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switzerland.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Greece.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Denmark.....	1	1	5	10	.....	.....	.....	.....	.....	.....
Cuba and West Indies.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other countries.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Unknown.....	3	1	9	10	.....	.....	.....	.....	.....	1
Total children, each sex.....	39	32	157	168	1	2	12	11	83	85
Total children, both sexes....	71		325		3		23		168	

TABLE XXXV., *Continued.*—NATIVITY (RELATIVE) OF FATHERS AND MOTHERS OF CHILDREN BORN IN BOSTON IN 1908.

BIRTHPLACES OF FATHERS.	BIRTHPLACES OF MOTHERS.									
	Austria.		Portugal.		Holland.		Belgium.		Switzerland.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....	2	1	4	1	.....	.....	.....	1	2	.....
United States, outside of Boston.....	2	1	.....	1	.....	.....	1	1	1	1
Ireland.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Br.-American Provinces.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Great Britain.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Germany.....	.....	3	.....	.....	.....	.....	1	.....	1	.....
Italy.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Russia.....	19	15	.....	.....	.....	.....	.....	.....	.....	.....
Norway.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sweden.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
China.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
France.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Turkey.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Austria.....	66	44	.....	.....	.....	.....	.....	.....	3	.....
Portugal.....	.....	.....	20	21	.....	.....	.....	.....	.....	.....
Holland.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....
Belgium.....	.....	.....	.....	.....	.....	.....	5	12	.....	.....
Switzerland.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2
Greece.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denmark.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cuba and West Indies.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other countries.....	3	1	.....	1	.....	.....	.....	1	.....	.....
Unknown.....	2	2	1	.....	.....	.....	.....	1	.....	.....
Total children, each sex.....	98	67	27	24	2	1	7	17	11	3
Total children, both sexes....	165		51		3		24		14	

TABLE XXXV., *Concluded*.—NATIVITY (RELATIVE) OF FATHERS AND MOTHERS OF CHILDREN BORN IN BOSTON IN 1908.

BIRTHPLACES OF FATHERS.	BIRTHPLACES OF MOTHERS.									
	Greece.		Denmark.		Cuba and West Indies.		All Other Countries.		Unknown.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Boston.....			3	1	1	1	.....	1	.....	.....
United States, outside of Boston.....			1	.....	2	3	.....	1	*2	1
Ireland.....				1	.....	.....	.....	.....	.....	.....
Br.-American Provinces.....					.....	.....	1	.....	.....	1
Great Britain.....					2	1	2	1	.....	.....
Germany.....			1	.....	.....	.....	.....	.....	.....	.....
Italy.....					.....	.....	1	.....	.....	.....
Russia.....					.....	.....	3	5	.....	1
Norway.....			1	2	.....	.....	.....	.....	.....	.....
Sweden.....			2	2	.....	.....	.....	.....	.....	.....
China.....					.....	.....	.....	.....	.....	.....
France.....					.....	.....	.....	.....	.....	.....
Turkey.....	1	.....			2	.....	.....	.....	.....	.....
Austria.....			1	.....	.....	.....	.....	1	.....	.....
Portugal.....					.....	.....	.....	.....	.....	.....
Holland.....					.....	.....	.....	.....	.....	.....
Belgium.....					.....	.....	.....	.....	.....	.....
Switzerland.....					.....	.....	.....	.....	.....	.....
Greece.....	15	14			.....	.....	.....	.....	.....	.....
Denmark.....			8	14	.....	.....	.....	.....	.....	.....
Cuba and West Indies.....					23	11	.....	1	.....	.....
All other countries.....					.....	.....	15	13	.....	.....
Unknown.....			2	.....	.....	.....	.....	.....	13	10
Total children, each sex.....	16	14	19	20	32	16	22	23	15	13
Total children, both sexes.....	30		39		48		45		28	

* At sea.

OCCUPATIONS OF FATHERS OF CHILDREN BORN IN BOSTON, 1908.

Government, National.

	Number and Sex of Children.	
	Male.	Female.
Military service	5	10
Naval service	7	12
Department head	—	1
Department officials	2	9
Department clerks	39	26
Letter carriers	28	34
Miscellaneous	7	4

State.

Department heads	1	—
Police	—	1

City.

Department head	1	—
Department officials	5	6
Department clerks	7	4
Fire Department	34	27
Police Department	74	76
Drawtenders	8	5
Skilled mechanics	2	—
Unskilled mechanics and laborers	18	17
Inspectors of labor	10	12
Janitors	3	1
Miscellaneous	3	9

Professional.

Clergymen	14	12
Religious, miscellaneous	3	4
Lawyers	28	30
Legal, miscellaneous	—	2
Physicians and surgeons	41	34
Dentists	14	15
Veterinarians	1	2
Nurses	5	1
Hospital attendant	—	1
Journalists	2	7
Editors	8	5
Reporters	9	4
Authors	2	2
Architects	9	7
Artists (painting, drawing)	8	8
Sculptors	1	2
Musicians (?)	31	35
Miscellaneous professional	4	4

	Number and Sex of Children.	
	Male.	Female.
Actors	7	8
Miscellaneous entertainment	7	8
Instructors, school and college	3	3
Teachers, schools	17	12
Teachers, music	3	—
Students	6	—

Domestic Service.

Hotel keepers	2	5
Boarding and lodging house keepers	1	3
Restaurant keepers	21	17
Cooks	71	72
Stewards	14	11
House servants	3	1
Butlers	3	6
Caterers	4	3
Waiters	89	100
Caretakers	6	2
Miscellaneous	8	—

Trade, Commerce and Finance.

Merchants and dealers	451	423
Peddlers and hawkers	139	145
Bankers, brokers and business agents	100	88
Clerks	430	350
Salesmen	239	250
Shippers and packers	79	92
Demonstrator	1	1
Managers, superintendents and buyers	76	43
Bookkeepers and accountants, etc.	66	73
Cashiers	6	13
Bank clerks, tellers, etc.	8	2
Real estate and insurance	16	1
Messengers, porters, elevator men, etc.	70	72
Miscellaneous	27	12
Builders	14	13
Contractors (not specified)	17	14
Book agents	4	—

Transportation.

Teamsters, truckmen, etc.	543	523
Cab and coach drivers	75	84
Conductors, railroad (steam and electric)	82	76
Engineers	14	6
Firemen	22	16
Brakemen	46	36
Motormen	81	77
Switchmen	5	6

	Number and Sex of Children.	
	Male.	Female.
Gatekeepers	3	2
Signalmen	5	4
Starters	3	5
Inspectors	10	6
Yardmen	5	3
Stevedores	6	—
Longshoremen	57	43
Wharfingers, freight and baggage handlers	49	43
Miscellaneous	22	27

Marine Occupations.

Sailors	22	23
Fishermen	42	50
Pilots and captains	6	10
Engineers	9	9
Firemen	3	4
Deckhands	1	3
Miscellaneous	—	1

Manual Labor.

Asbestos workers	2	2
Barbers and hairdressers	209	205
Bakers and confectioners	149	136
Blacksmiths	81	82
Boot and shoemakers and operatives	233	206
Butchers	78	68
Brewers and distillers	24	23
Boilermakers	33	29
Bridge builders	10	12
Boxmakers	4	8
Bartenders and wine clerks	74	61
Bootblacks	20	17
Brushmakers	6	9
Bookbinders	18	20
Boatmakers	4	—
Bottlers	17	21
Cabinetmakers	27	26
Carpenters and joiners	242	236
Cigar and tobacco workers	42	51
Coopers	9	11
Calkers	3	2
Clock and watchmakers	2	5
Carriage trimmers	11	7
Carriage builders	6	—
Chemists	7	29
Chauffeurs	36	21
Coppersmiths	11	9
Coremakers	8	9

	Number and Sex of Children.	
	Male.	Female.
Cutters (clothing)	20	17
Dyers and dye workers	1	6
Diver	—	1
Dredgers	4	1
Drillers	5	1
Engineers (stationary)	27	13
Electricians (working)	75	77
Electrotypers	9	1
Engravers	8	8
Firemen (?)	69	82
Firemen (stationary)	13	14
Farmers and farm laborers, gardeners and florists,	27	29
Fish curers	5	4
Furriers	12	5
Gold and silversmiths	3	5
Glassworkers	8	4
Harnessmakers	8	6
Iron, steel and metal workers	148	150
Inspectors (?)	13	10
Icemen	10	12
Janitors	66	65
Jewelers	14	17
Laborers	1,270	1,274
Laundry workers	22	19
Lathers	15	5
Leather workers (not boots and shoes)	25	22
Lamplighters	8	8
Locksmiths	4	—
Mechanics (?)	36	26
Mechanical engineers	6	—
Machinists	264	246
Marble and stone worker	33	34
Masons (brick and stone)	82	84
Mill and factory operatives	135	112
Molders (?)	19	19
Mattressmakers	15	7
Miners	3	1
Masseurs	2	1
Mosaic workers	3	4
None	26	18
Optician	8	5
Piano and organ builders	29	38
Printers, compositors and pressmen	128	119
Painters, glaziers, decorators and gilders	190	187
Patternmakers	5	—
Paperhangers	13	10
Plasterers and whitewashers	20	11
Photographers	21	9
Plumbers	64	62

	Number and Sex of Children.	
	Male.	Female.
Paper cutters and rulers	9	5
Picture framers	3	2
Pawnbrokers	—	2
Potters	2	—
Riggers	3	10
Roofers	21	11
Retired	3	1
Rubber workers	20	22
Ropemakers	6	8
Sailmakers	2	3
Shipbuilders	8	3
Steam and gas fitters	33	41
Stable keepers	3	1
Stablemen	64	48
Stereotypers	4	2
Tailors	452	432
Tinwaremakers	37	35
Telegraph and telephone operators, etc.	21	28
Tile workers	2	4
Undertakers	8	7
Unknown	445	442
Upholsterers	17	9
Woodworkers	19	28
Wheelwrights	2	2
Wire workers	15	18
Watchmen	33	25
Foremen (?)	42	34
Gas workers	5	—
Lumbermen	5	11
Bowling alley and poolroom keepers	7	7
Elevator constructors	3	3
Publishers	6	5
Surveyors	2	—
Draughtsmen and designers	21	14
Engineers (?)	87	86
Engineers, sanitary	2	2
Engineers, civil	11	22
Engineers, electrical	5	—

Of the fathers of male children who had occupations not specified in the above list, there were 2 each of sugar refiners, weighers and decorators, and 1 each of twenty-three trades or occupations not easily classified.

Of the fathers of female children who had occupations not specified in the above list there were 4 each of pipe workers, carpet layers, weighers, newspaper distributors and plaster workers; 3 lithographers; 2 each of prison officers, auto mechanics, locksmiths, umbrellamakers, kilnmen and garage employees; and 1 each of thirty-eight trades or occupations not easily classified.

BIRTHS IN INSTITUTIONS.

There were 2,882 children recorded as having been born in various institutions in this city in 1908; of these 1,478 were males and 1,404 females; 2,771 were white and 111 colored.

The ward residence of the parents is given in the following table:

Ward 1	.	.	.	33	Ward 15	.	.	.	32
2	.	.	.	36	16	.	.	.	51
3	.	.	.	31	17	.	.	.	72
4	.	.	.	31	18	.	.	.	87
5	.	.	.	21	19	.	.	.	68
6	.	.	.	49	20	.	.	.	166
7	.	.	.	74	21	.	.	.	87
8	.	.	.	105	22	.	.	.	113
9	.	.	.	116	23	.	.	.	87
10	.	.	.	118	24	.	.	.	108
11	.	.	.	93	25	.	.	.	38
12	.	.	.	156	Ward unknown	.	.	.	83
13	.	.	.	29	Nonresident	.	.	.	835
14	.	.	.	39	Unknown residence	.	.	.	124

PLURALITY BIRTHS.

The number of cases of plurality births recorded in Boston in 1908 was 266 (this includes all stillbirths in plurality cases). There were 6 cases where one child was stillborn, and 9 cases where both infants were stillborn. There were 94 pairs of male twins, 84 pairs of female twins, and 88 pairs which included one of each sex. There was 1 case of triplets, all females.

PLURALITY BIRTHS BY WARDS. (PAIRS.)

Ward 1	.	.	.	9	Ward 15	.	.	.	4
2	.	.	.	9	16	.	.	.	9
3	.	.	.	6	17	.	.	.	18
4	.	.	.	7	18	.	.	.	8
5	.	.	.	7	19	.	.	.	13
6	.	.	.	35	20	.	.	.	13
7	.	.	.	4	21	.	.	.	4
8	.	.	.	19	22	.	.	.	12
9	.	.	.	10	23	.	.	.	6
10	.	.	.	7	24	.	.	.	11
11	.	.	.	3	25	.	.	.	12
12	.	.	.	3	Ward unknown	.	.	.	1
13	.	.	.	12	Nonresident	.	.	.	13
14	.	.	.	9	Residence unknown	.	.	.	2

Seasons.— Birth of twins (pairs) by months and quarter-year periods:

January	19	July	33
February	18	August	18
March	18	September	25
—		—	
First quarter	55	Third quarter	66
April	19	October	23
May	28	November	24
June	31	December	20
—		—	
Second quarter	78	Fourth quarter	67

Color.— There were five pairs of colored twins.

PLURALITY BIRTHS, NATIVITY OF PARENTS.	PAIRS.		One of Each Sex.
	Males.	Females.	
Both parents born in Boston.....	4	10	4
“ “ “ United States outside of Boston.....	8	4	7
Father born in Boston, mother in United States, outside of Boston . .	3	1	3
“ “ United States,* mother in Boston.....	4	4	1
“ “ Boston, mother in Ireland.....	2	3	2
“ “ Boston, mother in Br.-American Provinces.....	3	1	.....
“ “ Boston, mother in Great Britain.....	1	.....	.....
“ “ United States,* mother in Br.-American Provinces..	2	2	1
“ “ United States, mother in Ireland.....	.....	1	4
“ “ United States, mother in Great Britain.....	.....	2	.....
“ “ United States, mother in Austria.....	.....	.....	1
“ “ Ireland, mother in Boston.....	2	1	.....
“ “ Br.-American Provinces, mother in Boston.....	.....	.....	2
“ “ Great Britain, mother in Boston.....	1	1	.....
“ “ Br.-American Provinces, mother in United States*..	2	3	1
“ “ Great Britain, mother in United States*.....	.....	.....	1
“ “ Sweden, mother in United States*.....	1	.....	.....
“ “ Ireland, mother in United States*.....	1	2	.....
Both parents born in Ireland.....	14	5	16

* Outside of Boston.

PLURALITY BIRTHS, NATIVITY OF PARENTS.	PAIRS.		One of Each Sex.
	Males.	Females.	
Both parents born in Br.-American Provinces.....	4	4	8
“ “ “ Italy.....	12	13	15
“ “ “ Russia.....	17	17	6
“ “ “ Great Britain.....	2	.....	1
“ “ “ Switzerland.....	.....	.....	1
“ “ “ Sweden.....	1	1	4
“ “ “ Turkey.....	1	.....	.....
“ “ “ Germany.....	2	1	.....
“ “ “ Denmark.....	.....	1	.....
Father's nativity unknown, mother born in Ireland.....	1	.....	.....
“ “ “ mother born in United States*.....	2	3	.....
“ “ “ mother born in Boston.....	.....	1	1
Both parents unknown.....	1	.....	.....
Father born in Russia, mother in Ireland.....	.....	.....	1
“ “ Br.-American Provinces, mother in Ireland.....	.....	1	1
“ “ Great Britain, mother in Ireland.....	.....	.....	1
“ “ Italy, mother in Ireland.....	.....	.....	1
“ “ Br.-American Provinces, mother in Great Britain...	1	.....	.....
“ “ Ireland, mother in Great Britain.....	.....	.....	1
“ “ Great Britain, mother in Br.-American Provinces...	1	.....	.....
“ “ Russia, mother in Sweden.....	.....	.....	1
“ “ Norway, mother in Sweden.....	.....	.....	1
“ “ Denmark, mother in Sweden.....	.....	.....	1
“ “ Sweden, mother in Denmark.....	.....	.....	1
“ “ Turkey, mother in Russia.....	1	.....	.....
“ “ Russia, mother in Austria.....	.....	1	.....
“ “ Turkey, mother in West Indies.....	1	.....	.....

* Outside of Boston.

The nativity of the parents of stillborn infants among the plurality births was as follows:

PARENT NATIVITY OF STILLBORN CHILDREN AMONG THE PLURALITY BIRTHS.	PAIRS.		One of Either Sex.	
	Males.	Females.	Males.	Females.
Father born in Boston, mother in United States*.....	.....	.....	1	.....
Both parents born in Italy.....	1	.....	2	1
“ “ “ Russia.....	1	.....	1	.....
“ “ “ Ireland.....	1	.....	.....	.....
Both parents of unknown nativity.....	1	.....	.....	.....
Father born in the United States,* mother in Boston.....	1	.....	1	1
Father of unknown nativity, mother in United States*.....	1	.....	.....	.....
Father born in Br.-American Prov., mother in United States..	.....	1	.....	.....

* Outside of Boston.

STILLBIRTHS IN BOSTON IN 1908.

There were 637 stillborn infants recorded in this department in 1908, or 93 less than in 1907.

Sex.— There were 388 males and 249 females.

Color.— There were 619 white, 375 males, 244 females; and 18 colored, 13 males and 5 females.

Seasons.—

	Males.	Females.	Total.
January	20	19	39
February	32	16	48
March	34	20	54
First quarter	86	55	141
April	39	18	57
May	27	23	50
June	36	28	64
Second quarter	102	69	171
July	31	18	49
August	34	27	61
September	26	19	45
Third quarter	91	64	155

	Males.	Females.	Total.
October	28	23	51
November	46	21	67
December	25	17	42
Fourth quarter	99	61	160

One or Both Parents Native.

BIRTHPLACES. Father's Birthplace First in Mixed Nativity.	Males.	Females.	Total.	BIRTHPLACES. Father's Birthplace First in Mixed Nativity.	Males.	Females.	Total.
				<i>Brought forward</i>	81	49	130
Both Boston	33	26	59	Unknown and Boston	4	7	11
Boston and United States	12	6	18	Both United States*	32	20	52
Boston and Ireland	5	2	7	United States* and Boston	17	16	33
Boston and Br.-Am. Prov.	3	4	7	United States* and Ireland	5	4	9
Boston and Great Britain	2		2	U. S. and Br.-Am. Prov.	8	4	12
Boston and Italy	1		1	U. S. and Great Britain	4		4
Boston and Sweden	1		1	Ireland and United States*	1		1
Boston and Germany		1	1	Br.-Am. Prov. and U. S.*	4	5	9
Ireland and Boston	6	1	7	Great Britain and U. S.*	1	1	2
Br.-Am. Prov. and Boston	10	4	14	Italy and United States*	1		1
Great Britain and Boston	3	3	6	Denmark and United States*		1	1
Germany and Boston	1	1	2	Country not specified and United States*		1	1
Russia and Boston	1		1	Unknown and United States*	11	4	15
Denmark and Boston	1		1	Russia and United States*	1		1
Portugal and Boston	2	1	3				
<i>Carried forward</i>	81	49	130	Total	170	112	282

*Outside of Boston.

Both Parents Foreign and of the Same Nativity.

	Males.	Females.	Total.
Ireland	47	29	76
British-American Provinces	14	20	34
Great Britain	4	3	7
Germany	3	1	4
Italy	44	32	76
Russia	61	23	84
Sweden	7	1	8
Austria	1	4	5
Portugal	—	1	1
Greece	—	1	1
Norway	2	1	3
Denmark	—	1	1
Turkey	1	1	2
France	1	—	1
West Indies	1	—	1
Switzerland	1	—	1
	187	118	305

Both Parents Foreign and of Different Nativity.

	Males.	Females.	Total.
Ireland and Great Britain	2	—	2
British-American Provinces and Ireland .	2	5	7
British-American Provinces and Great Britain	1	—	1
British-American Provinces and at sea .	1	—	1
Great Britain and British-American Provinces	3	2	5
West Indies and British-American Prov- inces	1	—	1
Great Britain and Ireland	2	—	2
Portugal and Ireland	1	—	1
Austria and Russia	1	—	1
Russia and Great Britain	1	—	1
Denmark and Sweden	—	1	1
Russia and Ireland	—	1	1
*All other countries and Ireland	—	1	1
	15	10	25

One or Both Parents of Unknown Nativity.

	Males.	Females.	Total.
Both unknown	10	5	15
Unknown and Ireland	2	—	2
Unknown and Great Britain	1	1	2
Unknown and British-American Provinces,	3	—	3
Unknown and Italy	—	2	2
*All other countries	—	1	1
	16	9	25

The number and proportion of children born by mothers of the following nativities in 1908, were:

	Number of Children.	Per cent of Total Births.
Of American mothers	6,554	35.7
Irish mothers	3,085	16.8
Russian mothers	2,492	13.5
Italian mothers	2,538	13.7
British-American mothers	1,881	10.2

* Country not specified in general tables.

The next table gives the same information regarding the mothers of the 637 stillborn infants in 1908:

	Stillbirths.	Per cent of Whole Number of Still- births.
Of American mothers	238	37.3
Irish mothers	106	16.6
Russian mothers	85	13.3
Italian mothers	79	12.4
British-American mothers	62	9.7
All other foreign and unknown mothers,	67	10.5

The proportion of stillborn infants to the whole number of children born of mothers of each of the above specified nativities is shown by the following table:

	Whole Number of Children.	Still- births.	Per cent of Still- births to Living Births.	Or One in Every
American mothers.....	6,554	238	3.6	27.5
Irish mothers.....	3,085	106	3.4	29.1
Russian mothers.....	2,492	85	3.4	29.3
Italian mothers.....	2,538	79	3.1	32.1
British-American mothers.....	1,881	62	3.2	30.3
All other foreign and unknown mothers...	1,797	67	3.4	26.8

APPENDIX.

WARD STATISTICS, 1908, AND MISCELLANEOUS
TABLES.

WARD STATISTICS, 1908.

The following pages give the most important vital statistics and population, also a comparative analysis for the years 1903, 1904, 1905, 1906, 1907, 1908, together with the area, number of dwellings to the acre, number of persons to a dwelling and number of persons to the acre, or density of population, for each of the wards in the city; also the principal causes of death in each, the chief cause being first in order.

The figures for population are estimated and are furnished by the State Bureau of Labor and Statistics. The areas are from the report of the City Engineer for 1896, or directly following the establishment of the present ward lines, and the figures regarding the dwelling houses are taken from the report of the Assessing Department for the year 1908, and is a statement of the number of dwellings in existence on May 1 of that year.

The ward areas in the statistics are land areas only, flats and water not included; neither are parks or cemeteries or other large tracts not devoted to residential purposes excluded; the density is reckoned on the total land area.

Ward I. (East Boston.)

AREA (land), 1,188 acres.
Dwelling houses, 3,262.
Persons to a dwelling, 8.2.
Density of population, 22.6.
Dwellings to the acre, 2.7.

POPULATION, 26,836.
Males, 13,239; females, 13,597.
Native born, 17,830.
Foreign born, 9,006.
Per cent of native born to ward population, 66.44.
Per cent of foreign born to ward population, 33.56.

Ward Statistics of Deaths and Births.

Deaths, 424. { Males, 220.
 { Females, 204.
Per cent of total mortality of residents of the city, 4.2.
Per cent of ward population, 1.5.
Death rate, 15.8 per 1,000 of population.
Deaths under 1 year, 115.
Per cent of total mortality of the city under 1 year, 5+.

Births, 721. { Males, 344.
 { Females, 377.
Birth rate, 27.3 per 1,000.
Per cent of ward population, 2.7.
One in every 37.

Principal causes of death: Pneumonia, diseases of the heart, phthisis.

Principal foreign nationalities represented among deaths: British-American Provinces, Ireland.

Topography.—The East Boston portion of the ward is generally of good elevation, consisting of two hills, one rising to 85 feet, on which is located the reservoir; another at the south-eastern extremity, rising to about 50 feet. A depression almost to tide water exists southeast of the tracks of the Boston & Albany Railroad.

The section known as Breed's Island consists of practically one large hill, whose maximum height is above 160 feet, sloping abruptly westwardly and gradually eastwardly to the water.

Almost one-half of this section of the ward is low, being little above marsh level.

This is very largely a residential section, with the exception of the shore front, and contains 86 acres of park land and 10 acres of cemetery area.

Comparative Vital Statistics, 1904-1908.

WARD I.	1904.	1905.	1906.	1907.	1908.
Deaths	366	385	440	379	424
Per cent of total mortality of residents of the city	3.87	3.9	4.3	3.75	4.2
Per cent of ward population....	1.45	1.5	1.6	1.4	1.5
One in every	68	66	58	69	63
Death rate per 1,000 of population.....	14.5	15.1	16.9	14.3	15.8
Deaths under 1 year	80	79	108	79	115
Per cent of total mortality of residents of the city under 1 year.....	4.29	4.1	5.1	4+	5+
Principal causes of deaths:					
Phthisis	50	49	27	28	39
Pneumonia	41	56	68	47	64
Diseases of the heart.....	43	55	62	55	41
Apoplexy.....	14	27	22	10	29
Cancer.....	11	17	18	25	22
Typhoid fever.....	6	1	6	3	8
Diphtheria.....	4	9	10	8	4
Meningitis.....	17	15	32	14	17
Principal foreign nativities represented among deaths...}	Ireland. B.-A. Prov.	Ireland. B.-A. Prov.	B.-A. Prov. Ireland.	B.-A. Prov. Ireland.	B.-A. Prov. Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	30-34 yrs.	65-69 yrs.	65-69 yrs.	55-59 yrs.	70-74 yrs.
Births.....	624	705	674	771	721
Birth rate per 1,000.....	28.1	27.7	26.04	29.2	26.8
Per cent of ward population....	2.4	2.7	2.6	2.9	2.7
One in every	40	36	38	38	37
Excess of births over deaths....	258	320	230	392	297
Excess of births over deaths under 1 year.....	544	626	566	692	606
*Nativity of greatest number of foreign-born fathers....	Boston.	Boston.	Boston.	Boston.	B.-A. Prov.
*Nativity of greatest number of foreign-born mothers...	Boston.	Boston.	Boston.	Boston.	B.-A. Prov.
Per cent of whole number of births in the city.....	3.9	4.4	3.9	4.4	4.1

* This title commenced with 1908, continued through each ward; previous to 1908 it referred to fathers and mothers either native or foreign born.

Ward II. (East Boston.)

AREA (land), 357 acres.
 Dwelling houses, 2,250.
 Persons to a dwelling, 12.1.
 Density of population, 76.5.
 Dwellings to the acre, 6.3.

POPULATION, 27,339.
 Males, 14,863; females, 12,476.
 Native born, 15,184.
 Foreign born, 12,155.
 Per cent of native born to
 ward population, 55.53.
 Per cent of foreign born to
 ward population, 44.47.

Ward Statistics of Deaths and Births.

Deaths, 430. { Males, 235.
 { Females, 195.
 Per cent of total mortality of
 residents of the city, 4.2.
 Per cent of ward population,
 1.4.
 Death rate, 15.7 per 1,000 of
 population.
 Deaths under 1 year, 130.
 Per cent of total mortality of
 the city under 1 year, 5.6.

Births, 989. { Males, 523.
 { Females, 466.
 Birth rate, 36.1 per 1,000.
 Per cent of ward population,
 3.6.
 One in every 27.

Principal causes of death: Pneumonia, diseases of the heart,
 phthisis.

Principal foreign nationality represented among deaths:
 Ireland.

Topography.—The portion of the ward east of Lewis street
 is generally well elevated from about 65 feet at its center, slop-
 ing gradually northeasterly and abruptly southwesterly to the
 water.

The portion west of Lewis street is generally low, lying little
 above high water.

The greater portion of this ward is low filled land. It con-
 tains many stores, warehouses and wharves, and is a mixed
 business and residential section of the city. There are 2 acres
 of park area within the ward limits.

Comparative Vital Statistics, 1904-1908.

WARD II.	1904.	1905.	1906.	1907.	1908.
Deaths.....	418	390	440	395	430
Per cent of total mortality of residents of the city.....	4.42	4.1	4.2	2.86	4.2
Per cent of ward population....	1.65	1.5	1.6	1.4	1.5
One in every.....	60	36	61	67	63
Death rate per 1,000 of population.....	16.5	27.6	16.3	14.7	15.7
Deaths under 1 year.....	123	87	102	109	130
Per cent of total mortality of residents of the city under 1 year.....	6.61	4.5	4.8	5.5	4.2
Principal causes of death:					
Phthisis.....	57	49	51	55	30
Pneumonia.....	48	57	59	55	63
Diseases of the heart.....	41	41	63	47	50
Apoplexy.....	19	18	14	16	10
Cancer.....	15	17	21	16	26
Typhoid fever.....	2	4	6	1	11
Diphtheria.....	8	5	6	9	6
Meningitis.....	19	23	23	15	13
Principal foreign nativities represented among deaths...}	Ireland. B.-A. Prov.	Ireland. B.-A. Prov.	Ireland. B.-A. Prov.	Ireland. B.-A. Prov.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	1-2 yrs.	40-44 yrs.	65-69 yrs.	1-2 yrs.	1-2 yrs.
Births.....	698	717	785	852	989
Birth rate per 1,000.....	27.6	27.6	29.7	31.7	36.1
Per cent of ward population....	2.7	2.7	2.9	3.2	3.6
One in every.....	36	36	33	31	27
Excess of births over deaths....	280	327	345	457	559
Excess of births over deaths under one year.....	575	630	683	743	859
*Nativity of greatest number of foreign-born fathers.....	B.-A. Prov.	Italy.	Italy.	Italy.	Italy.
*Nativity of greatest number of foreign-born mothers.....	B.-A. Prov.	Italy.	Italy.	Italy.	Italy.
Per cent of whole number of births in the city.....	4.4	4.5	4.6	4.9	5.7

* See footnote, Ward I.

Ward III. (Charlestown.)

AREA (land), 332 acres.
 Dwelling houses, 1,643.
 Persons to a dwelling, 8.1.
 Density of population, 47.1.
 Dwellings to the acre, 4.9.

POPULATION, 15,649.
 Males, 7,845; females, 7,804.
 Native born, 11,235.
 Foreign born, 4,414.
 Per cent of native born to ward population, 71.79.
 Per cent of foreign born to ward population, 28.21.

Ward Statistics of Deaths and Births.

Deaths, 280. $\left\{ \begin{array}{l} \text{Males, 140.} \\ \text{Females, 140.} \end{array} \right.$
 Per cent of total mortality of residents of the city, 2.7.
 Per cent of ward population, 1.7.
 Death rate, 17.8 per 1,000 of population.
 Deaths under 1 year, 56.
 Per cent of total mortality of the city under 1 year, 2.4.

Births, 410. $\left\{ \begin{array}{l} \text{Males, 212.} \\ \text{Females, 198.} \end{array} \right.$
 Birth rate, 26.2 per 1,000.
 Per cent of ward population, 2.6.
 One in every 38.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.—Land well elevated. Within its limits is located Bunker Hill Monument. The hill at the base of the monument is 86 feet above low water. That portion of the ward north of Medford street has been reclaimed from tide water, and is but 4 feet above it.

The district bounded by the Mystic and Charles rivers and Mt. Vernon, Chelsea, Vine, Bunker Hill and Lexington streets is principally low land, and densely populated. It contains the Navy Yard, which includes 87 acres of the ward territory; there is 5 acres of park land and 6 acres of cemetery area within the ward limits.

Comparative Vital Statistics, 1904-1908.

WARD III.	1904.	1905.	1906.	1907.	1908.
Deaths.....	263	291	315	289	280
Per cent of total mortality of residents of the city.....	2.78	2.9	3.1	2.86	2.7
Per cent of ward population....	1.63	1.9	2+	1.8	1.7
One in every.....	61	50	47	53	55
Death rate per 1,000 of population.....	16.3	19.6	20.8	18.8	17.8
Deaths under 1 year.....	63	50	67	53	56
Per cent of total mortality of residents of the city under 1 year.....	3.38	2.6	3.1	2.6	2.4
Principal causes of death:					
Phthisis.....	30	44	45	28	23
✓Pneumonia.....	38	27	40	55	41
Diseases of the heart.....	28	36	35	44	35
Apoplexy.....	17	15	22	18	18
Cancer.....	6	11	12	9	12
Typhoid fever.....			7	3	1
Diphtheria.....	2	7	6	5	11
Meningitis.....	8	14	13	8	11
Principal foreign nativities represented among deaths...}	Ireland. {	Ireland. B.-A. Prov. {	Ireland. B.-A. Prov. }	Ireland. }	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	35-39 yrs.	65-69 yrs.	60-64 yrs.	60-64 yrs.	40-44 yrs.
Births.....	424	454	392	394	410
Birth rate per 1,000.....	26.3	30.6	25.9	25.6	26.2
Per cent of ward population....	2.63	3.1	2.5	2.5	2.6
One in every.....	30	32	38	39	38
Excess of births over deaths...	161	163	77	103	130
Excess of births over deaths under 1 year.....	361	404	325	341	354
* Nativity of greatest number of foreign-born fathers.....	Ireland.	Ireland.	Ireland.	America.	Ireland.
* Nativity of greatest number of foreign-born mothers....	Ireland.	Ireland.	Ireland.	America.	Ireland.
Per cent of whole number of births in the city.....	2.6	2.8	2.2	2.2	2.3

* See footnote, Ward I.

Ward IV. (Charlestown.)

AREA (land), 301 acres.
 Dwelling houses, 1,808.
 Persons to a dwelling, 7.3.
 Density of population, 43.8.
 Dwellings to the acre, 6.

POPULATION, 13,198.
 Males, 6,650; females, 6,548.
 Native born, 9,200.
 Foreign born, 3,998.
 Per cent of native born to
 ward population, 69.71.
 Per cent of foreign born to
 ward population, 30.29.

Ward Statistics of Deaths and Births.

Deaths, 225. { Males, 118.
 { Females, 107.
 Per cent of total mortality of
 residents of the city, 2.2.
 Per cent of ward population,
 1.7.
 Death rate, 17+ per 1,000
 of population.
 Deaths under 1 year, 42.
 Per cent of total mortality of
 the city under 1 year, 1.8.

Births, 372. { Males, 196.
 { Females, 176.
 Birth rate, 28.1 per 1,000.
 Per cent of ward population,
 2.8.
 One in every 35.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.— The portion of the ward north of Main street is generally well elevated; on Bunker Hill street, near North Mead street, the elevation is 108 feet above mean low water. This is the highest point in the Charlestown district.

The territory lying south of Main street is low, being about grade 17. From Sullivan square westerly, toward the Somerville line, the land rises.

Comparative Vital Statistics, 1904-1908.

WARD IV.	1904.	1905.	1906.	1907.	1908.
Deaths.....	222	255	243	253	225
Per cent of total mortality of residents of the city.....	2.35	2.6	2.3	2.5+	2.2
Per cent of ward population....	1.52	2.05	1.9	1.9	1.7
One in every.....	65	49	52	51	58
Death rate per 1,000 of population.....	15.2	20.4	19.08	19.5	17+
Deaths under 1 year.....	52	62	48	56	42
Per cent of total mortality of residents of the city under 1 year.....	2.79	3.2	2.2	2.8	1.8
Principal causes of death:					
Phthisis.....	24	41	26	32	28
Pneumonia.....	21	37	41	31	30
Diseases of the heart.....	33	26	23	32	26
Apoplexy.....	4	10	17	6	8
Cancer.....	7	11	8	7	10
Typhoid fever.....	3	2	5	1	.....
Diphtheria.....	5	1	2	4	12
Meningitis.....	8	15	12	7	5
Principal foreign nativity represented among deaths.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	35-39 yrs.	50-54 yrs.	65-69 yrs.	35-39 yrs.	50-54 yrs.
Births.....	361	348	345	405	372
Birth rate per 1,000.....	24.7	27.8	27.8	31.2	28.1
Per cent of ward population....	2.4	2.7	2.7	3.1	2.8
One in every.....	40	35	36	32	35
Excess of births over deaths....	139	93	102	152	147
Excess of births over deaths under 1 year.....	309	286	297	349	330
* Nativity of greatest number of foreign-born fathers.....	Ireland.	Ireland.	Ireland.	{ America. B.-A. Prov. }	Ireland.
* Nativity of greatest number of foreign-born mothers....	Ireland.	Ireland.	Ireland.	{ America. B.-A. Prov. }	Ireland.
Per cent of whole number of births in the city.....	2.2	2.2	2+	2.3	2.1

* See footnote, Ward I.

Ward V. (Charlestown.)

AREA (land), 205 acres.
 Dwelling houses, 1,227.
 Persons to a dwelling, 10.9.
 Density of population, 65.3.
 Dwellings to the acre, 5.9.

POPULATION, 13,387.
 Males, 7,293; females, 6,094.
 Native born, 8,752.
 Foreign born, 4,635.
 Per cent of native born to
 ward population, 65.36.
 Per cent of foreign born to
 ward population, 34.64.

Ward Statistics of Deaths and Births.

Deaths, 254. $\left\{ \begin{array}{l} \text{Males, 138.} \\ \text{Females, 116.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 2.5.
 Per cent of ward population,
 1.8.
 Death rate, 18.9 per 1,000 of
 population.
 Deaths under 1 year, 54.
 Per cent of total mortality of
 the city under 1 year, 2.3.

Births, 305. $\left\{ \begin{array}{l} \text{Males, 157.} \\ \text{Females, 148.} \end{array} \right.$
 Birth rate, 22.7 per 1,000.
 Per cent of ward population,
 2.2.
 One in every 43.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.— All of the ward lying north of Rutherford avenue and Bow street is of fair elevation; the portion south of these streets falls to a height little above high water, and may be considered low.

On the low land the density of population is less than the average of the ward; on the high land it is about 67 per cent greater than the average for the ward. There are 2 acres of cemetery area in this district.

Comparative Vital Statistics, 1904-1908.

WARD V.	1904.	1905.	1906.	1907.	1908.
Deaths.....	219	245	252	254	254
Per cent of total mortality of residents of the city.....	2.32	2.5	2.5	2.5+	2.5
Per cent of ward population....	1.54	1.9	1.9	1.9	1.8
One in every.....	64	51	51	51	52
Death rate per 1,000 of population.....	15.4	19.	19.61	19.3	18.9
Deaths under 1 year.....	46	53	45	50	54
Per cent of total mortality of residents of the city under 1 year.....	2.47	2.7	2.1	2.5	2.3
Principal causes of death:					
Phthisis.....	26	35	28	26	36
Pneumonia.....	32	30	34	38	38
Diseases of the heart.....	25	32	25	41	26
Apoplexy.....	13	15	16	16	14
Cancer.....	7	9	5	6	11
Typhoid fever.....	7	1	3	5	4
Diphtheria.....	2	3	2	3	3
Meningitis.....	6	12	11	11	7
Principal foreign nativity represented among deaths....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	60-64 yrs.	55-59 yrs.	{ 45-49 yrs. 60-64 yrs.	} 35-39 yrs.	60-64 yrs.
Births.....	305	300	311	304	305
Birth rate per 1,000.....	21.6	23.7	24.1	23.1	22.7
Per cent of ward population....	2.1	2.3	2.4	2.3	2.2
One in every.....	46	42	28	43	43
Excess of births over deaths...	86	55	59	50	51
Excess of births over deaths under 1 year.....	259	247	266	254	251
*Nativity of greatest number of foreign-born fathers....	Ireland.	Ireland.	Ireland.	{ America. Ireland.	} Ireland.
*Nativity of greatest number of foreign-born mothers....	Ireland.	Ireland.	Ireland.	{ America. Ireland.	} Ireland.
Per cent of whole number of births in the city.....	1.9	1.9	1.8	1.7	.3

* See footnote, Ward I.

Ward VI. (Old Boston.)

AREA (land), 293 acres.
 Dwelling houses, 1,494.
 Persons to a dwelling, 21.2.
 Density of population, 108.1.
 Dwellings to the acre, 5.1.

POPULATION, 31,676.
 Males, 17,498; females, 14,178.
 Native born, 12,334.
 Foreign born, 19,342.
 Per cent of native born to
 ward population, 38.93.
 Per cent of foreign born to
 ward population, 61.07.

Ward Statistics of Deaths and Births.

Deaths, 655. {Males, 359.
 Females, 296.
 Per cent of total mortality of
 residents of the city, 6.5.
 Per cent of ward population,
 2+.
 Death rate, 20.6 per 1,000 of
 population.
 Deaths under 1 year, 234.
 Per cent of total mortality of
 the city under 1 year, 10.2.

Births, 1,888. {Males, 938.
 Females, 950.
 Birth rate, 59.6 per 1,000.
 Per cent of ward population,
 5.9.
 One in every 16.

Principal causes of death: Pneumonia, diseases of the heart,
 phthisis.
 Principal foreign nationalities represented among deaths: Italy,
 Russia.

Topography.—The land is of good general elevation, with
 the exception of the water front and a small portion reclaimed
 from the Old Mill Pond, where the elevation is from 16 to 20 feet
 above mean low water. East of the location of the Old Mill
 Pond is Copp's Hill, whose maximum elevation is about 60 feet
 — that is, on the street grade; in the burying ground the eleva-
 tion reaches 65 feet.

The southwesterly extremity of the ward (Precinct 6) is
 marked by a considerable rise, which includes Pemberton square
 and the easterly brow of Beacon Hill, the extreme elevation of
 which, in this ward, being about 93 feet (at Bowdoin street).

This ward is in the old part of the city, and has the largest
 foreign population of any of the wards; although densely pop-
 ulated it still has a very large portion of its area given over to
 business purposes; it contains 3 acres of cemetery area and 1
 acre of playground.

The infant mortality is the greatest of any of the wards.

Comparative Vital Statistics, 1904-1908.

WARD VI.	1904.	1905.	1906.	1907.	1908.
Deaths.....	588	642	621	715	655
Per cent of total mortality of residents of the city.....	6.23	6.6	6.2	7.08	6.5
Per cent of ward population....	1.74	2.1	2+	2.3	2+
One in every.....	57	46	49	43	48
Death rate per 1,000 of population.....	17.4	21.4	20.3	22.9	20.6
Deaths under 1 year.....	173	181	210	222	234
Per cent of total mortality of residents of the city under 1 year.....	9.28	9.5	9.9	11.2	10.2
Principal causes of death:					
Phthisis.....	62	39	61	41	43
Pneumonia.....	133	187	166	206	174
Diseases of the heart.....	47	52	52	60	45
Apoplexy.....	13	16	12	19	17
Cancer.....	4	16	13	14	10
Typhoid fever.....		11	8	4	6
Diphtheria.....	21	8	2	22	12
Meningitis.....	43	51	36	47	34
Principal foreign nativities represented among deaths....	Italy. Ireland.	Italy. Ireland.	{ Italy. Ireland. Russia. }	Italy.	{ Italy. Russia. }
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	1-2 yrs.	60-64 yrs.	1-2 yrs.	2-4 yrs.	1-2 yrs.
Births.....	1,547	1,521	1,611	1,893	1,888
Birth rate per 1,000.....	45.9	50.7	52.7	60.8	59.6
Per cent of ward population....	4.5	5+	5.2	6.1	5.9
One in every.....	21	19	19	16	16
Excess of births over deaths....	959	879	990	1,178	1,233
Excess of births over deaths under 1 year.....	1,374	1,340	411	1,671	1,654
* Nativity of greatest number of foreign-born fathers.....	Italy.	Italy.	Italy.	Italy.	Italy.
* Nativity of greatest number of foreign-born mothers.....	Italy.	Italy.	Italy.	Italy.	Italy.
Per cent of whole number of births in the city.....	9.8	9.7	9.4	10.9	10.9

* See footnote, Ward I.

Ward VII. (Old Boston.)

AREA (land), 394 acres.
Dwelling houses, 1,197.
Persons to a dwelling, 13.8.
Density of population, 41.7.
Dwellings to the acre, 3+.

POPULATION, 16,466.
Males, 9,500; females, 6,966.
Native born, 8,955.
Foreign born, 7,511.
Per cent of native born to
ward population, 54.38.
Per cent of foreign born to
ward population, 45.62.

Ward Statistics of Deaths and Births.

Deaths, 354. { Males, 196.
Females, 158.
Per cent of total mortality of
residents of the city, 3.5.
Per cent of ward population,
2.1.
Death rate, 21.4 per 1,000 of
population.
Deaths under 1 year, 78.
Per cent of total mortality of
the city under 1 year, 3.4.

Births, 452. { Males, 236.
Females, 216.
Birth rate, 27.4 per 1,000.
Per cent of ward population,
2.7.
One in every 36.

Principal causes of death: Pneumonia, diseases of the heart, phthisis.

Principal foreign nationality represented among deaths: Ireland.

Topography.— The northerly half of this ward is well elevated. It includes the Common and reaches east, including what is known as the "Burnt District"; also the old Fort Hill district. The part of the ward lying between Beach street and Castle street, and from Pleasant street to the water, is generally low. It includes the old South Cove territory, which was reclaimed from tide water, and is about 6 feet above it. The highest point in the ward is at the junction of Beacon and Park streets, being there about 86 feet above mean low water.

Comparative Vital Statistics, 1904-1908.

WARD VII.	1904.	1905.	1906.	1907.	1908.
Deaths.....	395	315	338	331	354
Per cent of total mortality of residents of the city.....	4.18	3.2	3.3	3.28	3.5
Per cent of ward population....	2.42	2.2	2.1	2+	2.1
One in every.....	55	48	47	48	46
Death rate per 1,000 of population.....	24.2	22.1	21.2	20.4	21.4
Deaths under 1 year.....	55	52	59	53	78
Per cent of total mortality of residents of the city under 1 year.....	2.95	2.6	2.8	2.6	3.4
Principal causes of death:					
Phthisis.....	61	58	52	36	37
Pneumonia.....	70	50	58	50	64
Diseases of the heart.....	54	40	50	62	47
Apoplexy.....	16	11	6	16	14
Cancer.....	10	9	8	9	12
Typhoid fever.....	3	1	.....	2	3
Diphtheria.....	2	5	2	.....	10
Meningitis.....	7	12	10	8	10
Principal foreign nativity represented among deaths...	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	35-39 yrs.	35-39 yrs.	40-44 yrs.	35-39 yrs.	2-5 yrs.
Births.....	367	361	420	429	452
Birth rate per 1,000.....	22.4	23.1	26.4	26.5	27.4
Per cent of ward population....	2.2	2.3	2.6	2.6	2.7
One in every.....	44	43	37	37	36
Excess of births over deaths...	-28*	46	82	98	102
Excess of births over deaths under 1 year.....	312	309	361	376	374
† Nativity of greatest number of foreign-born fathers.....	Ireland.	Italy.	Italy.	Turkey.	Turkey.
† Nativity of greatest number of foreign-born mothers....	Ireland.	Italy.	Italy.	Turkey.	Turkey.
Per cent of whole number of births in the city.....	2.2	2.3	2.4	2.4	2.6

*More deaths than births.

† See footnote, Ward I.

Ward VIII. (Old Boston.)

AREA (land), 166 acres.
 Dwelling houses, 1,909.
 Persons to a dwelling, 17—.
 Density of population, 195.7.
 Dwellings to the acre, 11.4.

POPULATION, 32,493.
 Males, 17,743; females, 14,750.
 Native born, 13,922.
 Foreign born, 18,571.
 Per cent of native born to
 ward population, 42.84.
 Per cent of foreign born to
 ward population, 57.16.

Ward Statistics of Deaths and Births.

Deaths, 409. $\left\{ \begin{array}{l} \text{Males, 232.} \\ \text{Females, 177.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 4 $\frac{1}{4}$.
 Per cent of ward population,
 1.2.
 Death rate, 12.5 per 1,000 of
 population.
 Deaths under 1 year, 94.
 Per cent of total mortality of
 the city under 1 year, 4.1.

Births, 1,235. $\left\{ \begin{array}{l} \text{Males, 608.} \\ \text{Females, 627.} \end{array} \right.$
 Birth rate, 38 per 1,000.
 Per cent of ward population,
 3.8.
 One in every 26.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationalities represented among deaths: Russia, Ireland.

Topography.—The land may be considered generally quite low. A very small portion of the ward (Precinct 3) lies upon the northerly slope of Beacon Hill, from Beacon street directly north, including the State House. The elevation here is of course high, being between 90 and 100 feet at the summit, and sloping gradually. A large part of the ward was reclaimed from the Old Mill Pond. The land in the vicinity of the Massachusetts General Hospital is low, the grade being anywhere from 16 to 20.

Comparative Vital Statistics, 1904-1908.

WARD VIII.	1904.	1905.	1906.	1907.	1908.
Deaths.....	389	434	426	442	409
Per cent of total mortality of residents of the city.....	4.12	4.4	4.2	4.36	4+
Per cent of ward population....	1.22	1.4	1.3	1.3	1.2
One in every.....	81	71	73	72	79
Death rate per 1,000 of population.....	12.2	14.08	13.5	13.8	12.5
Deaths under 1 year.....	75	94	94	114	94
Per cent of total mortality of residents of the city under 1 year.....	4.02	4.9	4.4	5.8	4.1
Principal causes of death:					
Phthisis.....	59	33	49	46	40
Pneumonia.....	53	82	69	69	79
Diseases of the heart.....	43	58	59	60	38
Apoplexy.....	12	33	17	18	13
Cancer.....	15	18	19	8	11
Typhoid fever.....	5	3	5	.....	6
Diphtheria.....	10	2	2	6	3
Meningitis.....	8	33	27	17	18
Principal foreign nativities represented among deaths...}	Ireland. Russia.	Ireland. Russia.	Ireland. Russia.	Russia. Ireland.	Russia. Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....}	40-44 yrs. 45-49 yrs.	} 35-39 yrs.	1-2 yrs.	40-44 yrs.	1-2 yrs.
Births.....	1,028	913	1,067	1,205	1,235
Birth rate per 1,000.....	32.3	29.6	34.04	37.7	3.8
Per cent of ward population....	3.2	2.9	6.2	3.7	3.8
One in every.....	30	33	28	26	26
Excess of births over deaths...	639	479	641	763	826
Excess of births over deaths under 1 year.....	953	819	973	1,091	1,141
*Nativity of greatest number of foreign-born fathers.....	Russia.	Russia.	Russia.	Russia.	Russia.
*Nativity of greatest number of foreign-born mothers....	Russia.	Russia.	Russia.	Russia.	Russia.
Per cent of whole number of births in the city.....	6.5	5.8	6.2	6.9	7.1

* See footnote, Ward I.

Ward IX.

AREA (land), 186 acres.
Dwelling houses, 1,891.
Persons to a dwelling, 12.3.
Density of population, 125.3.
Dwellings to the acre, 10.1.

POPULATION, 23,317.
Males, 12,074; females, 11,243.
Native born, 13,555.
Foreign born, 9,762.
Per cent of native born to
ward population, 58.13.
Per cent of foreign born to
ward population, 41.87.

Ward Statistics of Deaths and Births.

Deaths, 455. $\left\{ \begin{array}{l} \text{Males, 263.} \\ \text{Females, 192.} \end{array} \right.$
Per cent of total mortality of
residents of the city, 4.5.
Per cent of ward population,
1.9.
Death rate, 19.5 per 1,000 of
population.
Deaths under 1 year, 104.
Per cent of total mortality of
the city under 1 year, 4.5.

Births, 803. $\left\{ \begin{array}{l} \text{Males, 419.} \\ \text{Females, 384.} \end{array} \right.$
Birth rate, 34.4 per 1,000.
Per cent of ward population,
3.4.
One in every 29.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.— This ward includes what was formerly Boston Neck, and most of the ward is made land. The average elevation of the ward is the lowest in the city, being about grade 16. Almost the entire territory is little above tide water, a portion of it, "Suffolk Street District," being filled from marsh level of its present grade, 18.

The corner of Shawmut avenue and Dwight street is at grade 12, and is one of the lowest grades in the city for a main thoroughfare.

Comparative Vital Statistics, 1904-1908.

WARD IX.	1904.	1905.	1906.	1907.	1908.
Deaths.....	456	481	456	473	455
Per cent of total mortality of residents of the city.....	4.83	4.9	4.5	4.68	4.5
Per cent of ward population.....	1.68	2.1	2+	2+	1.9
One in every.....	59	46	49	48	51
Death rate per 1,000 of population.....	16.8	21.7	20.2	20.6	19.5
Death under 1 year.....	71	82	86	80	104
Per cent of total mortality of residents of the city under 1 year.....	3.81	4.3	4+	4.1	4.5
Principal causes of death:					
Phthisis.....	54	67	56	54	46
Pneumonia.....	71	82	54	71	62
Diseases of the heart.....	58	57	63	78	39
Apoplexy.....	21	31	26	19	28
Cancer.....	11	19	17	18	19
Typhoid fever.....	2	1	5	.....	3
Diphtheria.....	9	2	7	2	5
Meningitis.....	13	12	12	26	13
Principal foreign nativities represented among deaths....	Ireland. B.-A. Prov.	Ireland.	Ireland. Russia.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	40-44 yrs.	60-64 yrs.	40-44 yrs.	50-54 yrs.	40-44 yrs
Births.....	580	570	652	760	803
Birth rate per 1,000.....	21.4	25.7	29.05	33.1	34.4
Per cent of ward population.....	2.1	2.5	2.8	3.3	3.4
One in every.....	46	38	34	30	29
Excess of births over deaths...	124	89	196	287	348
Excess of births over deaths under 1 year.....	509	488	566	680	699
*Nativity of greatest number of foreign-born fathers.....	Russia.	Russia.	Russia.	Russia.	Russia.
*Nativity of greatest number of foreign-born mothers.....	Russia.	Russia.	Russia.	Russia.	Russia.
Per cent of whole number of births in the city.....	3.6	3.6	3.8	4.3	4.6

* See footnote, Ward I.

Ward X.

AREA (land), 394 acres.
 Dwelling houses, 2,149.
 Persons to a dwelling, 11.7.
 Density of population, 63.8.
 Dwellings to the acre, 5.5.

POPULATION, 25,139.
 Males, 11,339; females, 13,800.
 Native born, 18,033.
 Foreign born, 7,106.
 Per cent of native born to
 ward population, 71.73.
 Per cent of foreign born to
 ward population, 28.27.

Ward Statistics of Deaths and Births.

Deaths, 307. $\left\{ \begin{array}{l} \text{Males, 139.} \\ \text{Females, 168.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 3.
 Per cent of ward population,
 1.2.
 Death rate, 12.2 per 1,000 of
 population.
 Deaths under 1 year, 46.
 Per cent of total mortality of
 the city under 1 year, 2+

Births, 335. $\left\{ \begin{array}{l} \text{Males, 175.} \\ \text{Females, 160.} \end{array} \right.$
 Birth rate, 13.3 per 1,000.
 Per cent of ward population,
 1.3.
 One in every 75.

Principal causes of death: Diseases of the heart, pneumonia,
 phthisis.

Principal foreign nationality represented among deaths: Ire-
 land.

Topography.— This ward was originally a marshy tract of
 land. It has been well filled, and is a fine residential section,
 with very little of it devoted to business purposes. The entire
 ward can be considered low, the territory being practically level
 at grade of 18.

Comparative Vital Statistics, 1904-1908.

WARD X.	1904.	1905.	1906.	1907.	1908.
Deaths.....	303	283	320	315	307
Per cent of total mortality of residents of the city.....	3.21	2.9	3.1	3.12	3.0
Per cent of ward population.....	1.24	1.1	1.3	1.2	1.2
One in every.....	80	84	75	78	81
Death rate per 1,000 of population.....	12.4	11.8	13.1	12.7	12.2
Deaths under 1 year.....	39	26	40	42	46
Per cent of total mortality of residents of the city under 1 year.....	2.09	1.7	1.8	2.1	2+
Principal causes of death:					
Phthisis.....	34	26	30	29	27
Pneumonia.....	42	43	48	30	32
Diseases of the heart.....	39	43	47	55	34
Apoplexy.....	15	16	19	20	15
Cancer.....	5	16	14	24	21
Typhoid fever.....	1	2	3	2	3
Diphtheria.....	1	6	3	3	11
Meningitis.....	6	8	9	8	5
Principal foreign nativities represented among deaths....	Ireland. B.-A.Prov.	Ireland. B.-A.Prov.	B.-A. Prov.	B.-A. Prov.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	50-55 yrs.	50-54 yrs.	{35-39 yrs. 55-59 yrs.}	45-49 yrs.	45-49 yrs.
Births.....	316	266	291	321	335
Birth rate per 1,000.....	12.9	11.1	12+	13	13.3
Per cent of ward population.....	1.2	1.1	1.2	1.3	1.3
One in every.....	74	89	83	77	75
Excess of births over deaths....	13	—17*	*	6	28
Excess of births over deaths under 1 year.....	277	240	251	279	289
†Nativity of greatest number of foreign-born fathers.....	U. S.†	U. S.†	U. S.†	America.	Ireland.
†Nativity of greatest number of foreign-born mothers...	U. S.†	U. S.†	U. S.†	America.	Ireland.
Per cent of whole number of births in the city.....	1.9	1.6	3.8	1.8	1.9

* Less births than deaths.

† See footnote, Ward I.

‡ Outside of Boston.

Ward XI.

AREA (land), 638 acres.
 Dwelling houses, 3,084.
 Persons to a dwelling, 7.6.
 Density of population, 36.9.
 Dwellings to the acre, 4.8.

POPULATION, 23,568.
 Males, 8,918; females, 14,650.
 Native born, 15,672.
 Foreign born, 7,896.
 Per cent of native born to
 ward population, 66.49.
 Per cent of foreign born to
 ward population, 33.51.

Ward Statistics of Deaths and Births.

Deaths, 280. { Males, 119.
 { Females, 161.
 Per cent of total mortality of
 residents of the city, 2.7.
 Per cent of ward population,
 1.1.
 Death rate, 11.8 per 1,000 of
 population.
 Deaths under 1 year, 30.
 Per cent of total mortality of
 the city under 1 year, 1.3.

Births, 369. { Males, 187.
 { Females, 182.
 Birth rate, 15.6 per 1,000.
 Per cent of ward population,
 1.5.
 One in every 63.

Principal causes of death: Pneumonia, diseases of the heart,
 apoplexy.

Principal foreign nationality represented among deaths: Ire-
 land.

Topography. — This district includes the westerly slope of
 Beacon Hill, the grade ranging from 108 to 17 at Charles street.
 The entire Back Bay district is within its limits, and may be
 called low, the grades along Beacon street being 17, while the
 remainder of the district is 18. The remainder of the ward,
 lying between Massachusetts avenue and St. Mary's street,
 ranges from a grade of 19 to about 30; its average, however,
 will be about 20.

Comparative Vital Statistics, 1904-1908.

WARD XI.	1904.	1905.	1906.	1907.	1908.
Deaths.....	286	287	313	283	280
Per cent of total mortality of residents of the city.....	3.03	2.9	3.1	2.86	2.7
Per cent of ward population....	1.34	1.2	1.3	1.2	1.1
One in every.....	74	77	72	81	84
Death rate per 1,000 of population.....	13.4	12.8	13.3	12.2	11.8
Deaths under 1 year.....	27	34	44	26	30
Per cent of total mortality of residents of the city under 1 year.....	1.45	1.7	2+	1.3	1.3
Principal causes of death:					
Phthisis.....	26	27	30	26	17
Pneumonia.....	39	44	43	42	38
Diseases of the heart.....	36	55	56	46	38
Apoplexy.....	21	21	30	24	22
Cancer.....	15	18	9	19	12
Typhoid fever.....	7	3	4	.....	3
Diphtheria.....	2	2	1	1	3
Meningitis.....	8	4	9	7	6
Principal foreign nativities represented among deaths... }	Ireland. B.-A. Prov. }	Ireland. }	Ireland. B.-A. Prov. }	Ireland. }	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	55-59 yrs.	65-69 yrs.	60-64 yrs.	65-69 yrs.	65-69 yrs.
Births.....	267	294	344	388	369
Birth rate per 1,000.....	12.5	13.1	15.1	16.7	15.6
Per cent of ward population....	1.2	1.3	1.5	1.6	1.5
One in every.....	79	76	66	59	63
Excess of births over deaths....	—19*	7	31	105	89
Excess of births over deaths under 1 year.....	240	260	300	362	339
†Nativity of greatest number of foreign-born fathers.....	U. S.‡	U. S.‡	U. S.‡	Russia.	Russia.
†Nativity of greatest number of foreign-born mothers.....	U. S.‡	U. S.‡	U. S.‡	U. S.§	Russia.
Per cent of whole number of births in the city.....	1.6	1.8	2+	2.2	2.1

* Less births than deaths.

† See footnote, Ward I.

‡ Outside of Boston.

§ Russian mothers are very nearly equal in number to native mothers.

Ward XII.

AREA (land), 235 acres.
 Dwelling houses, 2,329.
 Persons to a dwelling, 9.8.
 Density of population, 97.6.
 Dwellings to the acre, 9.9.

POPULATION, 22,940.
 Males, 10,143; females, 12,797.
 Native born, 15,754.
 Foreign born, 7,186.
 Per cent of native born to
 ward population, 68.67.
 Per cent of foreign born to
 ward population, 31.33.

Ward Statistics of Deaths and Births.

Deaths, 354. { Males, 182.
 { Females, 172.
 Per cent of total mortality of
 residents of the city, 3.5.
 Per cent of ward population,
 1.5.
 Death rate, 15.4 per 1,000 of
 population.
 Deaths under 1 year, 48.
 Per cent of total mortality of
 the city under 1 year, 2+

Births, 401. { Males, 224.
 { Females, 177.
 Birth rate, 17.4 per 1,000.
 Per cent of ward population,
 1.7.
 One in every 57.

Principal causes of death: Phthisis, pneumonia, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.— This ward is generally low land; it includes 7 acres of park area, and is a residential section. The maximum grade is about 18, the minimum about 16.

Comparative Vital Statistics, 1904-1908.

WARD XII.	1904.	1905.	1906.	1907.	1908.
Deaths.....	370	396	356	373	354
Per cent of total mortality of residents of the city.....	3.92	4.0	3.5	3.75	3.5
Per cent of ward population....	1.42	1.8	1.6	1.6	1.5
One in every.....	70	54	62	60	64
Death rate per 1,000 of population.....	14.2	18.2	16.04	16.5	15.4
Deaths under 1 year.....	54	49	63	38	48
Per cent of total mortality of residents of the city under 1 year.....	2.90	2.6	2.9	1.9	2+
Principal causes of death:					
Phthisis.....	47	46	30	45	38
Pneumonia.....	45	50	43	63	36
Diseases of the heart.....	54*	64	56	50	34
Apoplexy.....	17	28	26	19	16
Cancer.....	10	15	28	13	27
Typhoid fever.....	10	5	2	2	6
Diphtheria.....	4	.....	4	5	4
Meningitis.....	10	12	13	10	12
Principal foreign nativities represented among deaths....	Ireland.	{ Ireland. B.-A. Prov. }	{ Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	60-64 yrs.	65-69 yrs.	{ 40-44 yrs. 60-64 yrs. 70-74 yrs. }	50-54 yrs.	60-64 yrs.
Births.....	288	317	346	396	401
Birth rate per 1,000.....	11.07	14.5	15.2	17.7	17.4
Per cent of ward population....	1.1	1.4	1.5	1.7	1.7
One in every.....	90	68	27	56	57
Excess of births over deaths....	—82*	—79*	*	23	47
Excess of births over deaths under 1 year.....	234	268	283	335	353
†Nativity of greatest number of foreign-born fathers....	U. S.‡	U. S.‡	U. S.‡	U. S.	{ Ireland. B.-A. Prov. }
†Nativity of greatest number of foreign-born mothers....	U. S.‡	U. S.‡	U. S.‡	U. S.	Ireland.
Per cent of whole number of births in the city.....	1.8	2+	2+	2.2	2.3

* More deaths than births.

† See footnote, Ward I.

‡ Outside of Boston.

Ward XIII. (South Boston.)

AREA (land), 604 acres.
Dwelling houses, 2,148.
Persons to a dwelling, 10.6.
Density of population, 37.8.
Dwellings to the acre, 3.5.

POPULATION, 22,877.
Males, 11,829; females, 11,048.
Native born, 13,311.
Foreign born, 9,566.
Per cent of native born to
ward population, 58.11.
Per cent of foreign born to
ward population, 41.89.

Ward Statistics of Deaths and Births.

Deaths, 486. { Males, 267.
 { Females, 219.
Per cent of total mortality of
residents of the city, 4.8.
Per cent of ward population,
2.1.
Death rate, 21.2 per 1,000 of
population.
Deaths under 1 year, 150.
Per cent of total mortality of
the city under 1 year, 6.5.

Births, 750. { Males, 370.
 { Females, 380.
Birth rate, 32.7 per 1,000.
Per cent of ward population,
3.2.
One in every 30.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.—Much of the area of this ward is made land, and lies quite low, very little of it, except the part in the vicinity of West Broadway, being but a few feet above high water; nearly, if not quite, one-half of the solid area of the ward has been reclaimed from tide water. A great part of this ward is given over to business purposes, notably the water front and the land contiguous to the New York, New Haven & Hartford Railroad.

Comparative Vital Statistics, 1904-1908.

WARD XIII.	1904.	1905.	1906.	1907.	1908.
Deaths.....	464	516	516	515	486
Per cent of total mortality of residents of the city.....	4.91	5.3	5.1	5.1+	4.8
Per cent of ward population....	1.84	2.3	2.3	2.2	2.1
One in every.....	54	42	42	43	47
Death rate per 1,000 of population.....	18.4	23.8	23.3	22.9	21.2
Deaths under 1 year.....	117	136	150	111	150
Per cent of total mortality of residents of city under 1 year.....	6.28	7.1	7+	5.6	6.5
Principal causes of death:					
Phthisis.....	74	95	73	62	50
Pneumonia.....	50	69	89	62	75
Diseases of the heart.....	51	40	51	70	46
Apoplexy.....	23	19	22	24	12
Cancer.....	9	15	15	19	16
Typhoid fever.....	9	6	2	2	3
Diphtheria.....	13	2	10	2	14
Meningitis.....	11	24	18	36	17
Principal foreign nativity represented among deaths.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	35-39 yrs.	45-49 yrs.	{35-39 yrs. 45-49 yrs.	35-39 yrs. 40-44 yrs.	}1-2 yrs.
Births.....	784	761	767	766	750
Birth rate per 1,000.....	31.1	35.1	36.1	34.1	32.7
Per cent of ward population....	3.1	3.5	3.6	3.4	2.1
One in every.....	32	28	27	29	30
Excess of births over deaths....	320	245	281	251	264
Excess of births over deaths under 1 year.....	667	625	647	655	336
* Nativity of greatest number of foreign-born fathers.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
* Nativity of greatest number of foreign-born mothers.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Per cent of whole number of births in the city.....	4.9	4.8	4.6	4.3	4.3

* See footnote, Ward I.

Ward XIV. (South Boston.)

AREA (land), 385 acres.
 Dwelling houses, 2,533.
 Persons to a dwelling, 9.2.
 Density of population, 60.7.
 Dwellings to the acre, 6.5.

POPULATION, 23,380.
 Males, 11,614; females, 11,766.
 Native born, 15,916.
 Foreign born, 7,464.
 Per cent of native born to
 ward population, 68.07.
 Per cent of foreign born to
 ward population, 31.93.

Ward Statistics of Deaths and Births.

Deaths, 389. $\left\{ \begin{array}{l} \text{Males, 206.} \\ \text{Females, 183.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 3.8.
 Per cent of ward population,
 1.6.
 Death rate, 16.6 per 1,000 of
 population.
 Deaths under 1 year, 92.
 Per cent of total mortality of
 the city under 1 year, 4.

Births, 637. $\left\{ \begin{array}{l} \text{Males, 322.} \\ \text{Females, 315.} \end{array} \right.$
 Birth rate, 27.2 per 1,000.
 Per cent of ward population,
 2.7.
 One in every 36.

Principal causes of death: Pneumonia, phthisis.

Principal foreign nationality represented among deaths: Ire-
 land.

Topography.— This ward has a rolling surface, some very high land, and is almost surrounded by water; the difference in death rates between this ward and the neighboring Ward 13 is very marked, and is no doubt largely due to the character of the land within its limits.

Though there are no extreme elevations in this ward, the area is well disposed for drainage purposes, and from a maximum height of about 90 feet the land slopes gradually to the sea.

Comparative Vital Statistics, 1904-1908.

WARD XIV.	1904.	1905.	1906.	1907.	1908.
Deaths.....	409	401	408	384	389
Per cent of total mortality of residents of the city.....	4.33	4.1	4+	3.76	3.8
Per cent of ward population....	1.73	1.8	1.8	1.6	1.6
One in every.....	57	55	55	59	60
Death rate per 1,000 of population.....	17.3	18.5	18.09	16.7	16.6
Deaths under 1 year.....	70	62	81	80	92
Per cent of total mortality of residents of the city under 1 year.....	3.76	3.2	3.8	4.1	4
Principal causes of death:					
Phthisis.....	55	47	52	56	42
Pneumonia.....	55	47	55	54	53
Diseases of the heart.....	58	58	54	44	39
Apoplexy.....	19	29	18	28	29
Cancer.....	9	24	17	16	20
Typhoid fever.....	8	6	3	3	3
Diphtheria.....	5	5	6	4	4
Meningitis.....	15	15	16	17	12
Principal foreign nativity represented among deaths.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	50-55 yrs.	60-64 yrs.	60-64 yrs.	45-49 yrs.	40-44 yrs.
Births.....	566	587	619	701	637
Birth rate per 1,000.....	23.9	26.4	27.4	30.5	27.2
Per cent of ward population....	2.3	2.6	2.7	3.1	2.7
One in every.....	41	37	36	32	36
Excess of births over deaths...	157	186	211	317	248
Excess of births over deaths under 1 year.....	496	525	538	621	545
*Nativity of greatest number of foreign-born fathers.....	Ireland.	U. S.†	Boston.	U. S.†	Ireland.
*Nativity of greatest number of foreign-born mothers.....	U. S.†	U. S.†	Ireland.	U. S.†	Ireland.
Per cent of whole number of births in the city.....	3.5	3.7	3.6	4.1	3.6

* See footnote, Ward I.

† Outside of Boston.

Ward XV. (South Boston.)

AREA (land), 243 acres.
 Dwelling houses, 2,387.
 Persons to a dwelling, 8.9.
 Density of population, 88.1.
 Dwellings to the acre, 9.8.

POPULATION, 21,431.
 Males, 10,358; females, 11,073.
 Native born, 14,899.
 Foreign born, 6,352.
 Per cent of native born to
 ward population, 69.52.
 Per cent of foreign born to
 ward population, 30.48.

Ward Statistics of Deaths and Births.

Deaths, 357. { Males, 170.
Females, 187.
 Per cent of total mortality of
 residents of the city, 3.5.
 Per cent of ward population,
 1.6.
 Death rate, 16.6 per 1,000 of
 population.
 Deaths under 1 year, 93.
 Per cent of total mortality of
 the city under 1 year, 4.

Births, 525. { Males, 268.
Females, 257.
 Birth rate, 24.9 per 1,000.
 Per cent of ward population,
 2.4.
 One in every 40.

Principal causes of death: Phthisis, pneumonia, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.— A portion of the ward, in the vicinity of Telegraph Hill, is relatively very high, above 150 feet; the territory from the foot of the slope of the hill is generally quite low, being but a few feet above tide water.

Comparative Vital Statistics, 1904-1908.

WARD XV.	1904.	1905.	1906.	1907.	1908.
Deaths	329	340	356	357	357
Per cent of total mortality of residents of the city.....	3.48	3.4	3.5	3.53	3.5
Per cent of ward population.....	1.51	1.6	1.7	1.6	1.6
One in every	65	59	55	58	60
Death rate per 1,000 of population.....	15.1	16.7	17.2	16.9	16.6
Deaths under 1 year	63	75	81	62	93
Per cent of total mortality of residents of the city under 1 year.....	3.38	3.9	3.8	3.1	4.0
Principal causes of death:					
Phthisis	51	45	53	36	50
Pneumonia	30	66	49	38	44
Diseases of the heart.....	44	47	44	63	34
Apoplexy.....	12	11	15	15	23
Cancer	8	10	16	24	14
Typhoid fever	2	3	4	.....	3
Diphtheria.....	4	3	5	5	4
Meningitis	12	18	17	26	12
Principal foreign nativity represented among deaths.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	50-54 yrs.	25-29 yrs.	45-49 yrs.	60-64 yrs.	65-69 yrs.
Births	489	493	504	467	525
Birth rate per 1,000.....	22.5	24.2	24.3	22.1	24.9
Per cent of ward population.....	2.2	2.4	2.4	2.2	2.4
One in every	44	41	41	45	40
Excess of births over deaths	160	153	148	110	168
Excess of births over deaths under 1 year.....	426	418	275	405	432
*Nativity of greatest number of foreign-born fathers.....	Boston.	U. S.†	Boston.	{ U. S. Ireland.	{ Ireland.
*Nativity of greatest number of foreign-born mothers.....	Boston.	U. S.†	Boston.	{ U. S. Ireland.	{ Ireland.
Per cent of whole number of births in the city.....	3.1	3.1	2.9	2.7	3+

* See footnote, Ward I.

† Outside of Boston.

Ward XVI. (Parts of Dorchester and South Boston.)

AREA (land), 564 acres.
 Dwelling houses, 2,491.
 Persons to a dwelling, 9.2.
 Density of population, 41+.
 Dwellings to the acre, 4.4.

POPULATION, 23,128.
 Males, 10,910; females, 12,218.
 Native born, 16,690.
 Foreign born, 6,438.
 Per cent of native born to
 ward population, 72.16.
 Per cent of foreign born to
 ward population, 27.84.

Ward Statistics of Deaths and Births.

Deaths, 334. { Males, 170.
 { Females, 164.
 Per cent of total mortality of
 residents of the city, 3.3.
 Per cent of ward population,
 1.4.
 Death rate, 14.4 per 1,000 of
 population.
 Deaths under 1 year, 70.
 Per cent of total mortality of
 the city under 1 year, 3.

Births, 556. { Males, 304.
 { Females, 252.
 Birth rate, 24 per 1,000.
 Per cent of ward population,
 2.4.
 One in every 41.

Principal causes of death: Pneumonia, diseases of the heart,
 phthisis.

Principal foreign nationality represented among deaths: Ire-
 land.

Topography.—The grade of one-half the territory in the
 ward is high, the maximum being about 116, it sloping easterly
 to Norfolk avenue, where the depression around the South Bay
 and Dorchester Bay begins, and where the grade falls off to 17,
 18 and 20.

Comparative Vital Statistics, 1904-1908.

WARD XVI.	1904.	1905.	1906.	1907.	1908.
Deaths.....	303	337	344	325	334
Per cent of total mortality of residents of the city.....	3.21	3.4	3.4	3.22	3.3
Per cent of ward population....	1.37	1.5	1.5	1.4	1.4
One in every.....	72	65	64	69	69
Death rate per 1,000 of population.....	13.7	15.3	15.4	14.3	14.4
Deaths under 1 year.....	66	62	67	50	70
Per cent of total mortality of residents of the city under 1 year.....	3.54	3.2	3.1	2.5	3.0
Principal causes of death:					
Phthisis.....	32	43	29	32	29
Pneumonia.....	33	47	47	45	46
Diseases of the heart.....	53	41	58	37	40
Apoplexy.....	15	22	21	12	14
Cancer.....	8	23	11	15	17
Typhoid fever.....	6	1	5	.....	3
Diphtheria.....	9	4	9	3	4
Meningitis.....	16	22	14	13	6
Principal foreign nativities represented among deaths....	Ireland.	Ireland.	{ Ireland. B.-A. Prov. }	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	35-39 yrs.	55-59 yrs.	70-74 yrs.	55-59 yrs.	70-74 yrs.
Births.....	538	506	545	572	556
Birth rate per 1,000.....	24.3	23.1	24.4	25.1	24+
Per cent of ward population....	2.4	2.3	2.4	2.5	2.4
One in every.....	41	43	40	39	41
Excess of births over deaths...	235	169	201	247	222
Excess of births over deaths under 1 year.....	472	444	478	522	486
*Nativity of greatest number of foreign-born fathers.....	Boston.	U. S.†	Boston.	{ U. S. B.-A. Prov. }	B.-A. Prov.
*Nativity of greatest number of foreign-born mothers.....	Boston.	U. S.†	Boston.	{ U. S. Ireland. }	Ireland.
Per cent of whole number of births in the city.....	3.4	3.2	3.1	3.3	3.2

* See footnote, Ward I.

† Outside of Boston.

Ward XVII. (Part of Roxbury.*)

AREA (land), 423 acres.
 Dwelling houses, 2,570.
 Persons to a dwelling, 9.9.
 Density of population, 60.6.
 Dwellings to the acre, 6+.

POPULATION, 25,642.
 Males, 12,381; females, 13,261
 Native born, 17,300.
 Foreign born, 8,342.
 Per cent of native born to
 ward population, 67.46.
 Per cent of foreign born to
 ward population, 32.54.

Ward Statistics of Deaths and Births.

Deaths, 499. { Males, 248.
Females, 251.
 Per cent of total mortality of
 residents of the city, 4.9.
 Per cent of ward population,
 1.9.
 Death rate, 19.4 per 1,000 of
 population.
 Deaths under 1 year, 117.
 Per cent of total mortality of
 the city under 1 year, 5.1.

Births, 715. { Males, 351.
Females, 364.
 Birth rate, 27.8 per 1,000.
 Per cent of ward population,
 2.7.
 One in every 35.

Principal causes of death: Pneumonia, diseases of the heart,
 phthisis.

Principal foreign nationality represented among deaths: Ire-
 land.

Topography.— The southerly end of the ward, which includes
 Mt. Pleasant, is well elevated and well disposed for proper drain-
 age; the maximum grade reaches nearly 110; the more easterly
 portion, lying north of Eustis street, Hampden street and
 Dudley street, may be considered low, the grade varying from
 20 at Hampden street to high-water level.

* A very small portion of this ward was formerly part of Dorchester.

Comparative Vital Statistics, 1904-1908.

WARD XVII.	1904.	1905.	1906.	1907.	1908.
Deaths	503	469	480	473	499
Per cent of total mortality of residents of the city.....	5.33	4.8	4.7	4.68	4.9
Per cent of ward population.....	1.82	1.9	1.9	1.8	1.9
One in every	54	41	51	53	51
Death rate per 1,000 of population.....	18.2	19.2	19.3	18.7	19.4
Deaths under 1 year	114	107	108	100	117
Per cent of total mortality of residents of the city under 1 year.....	6.12	5.6	5.1	5.1	5.1
Principal causes of death:					
Phthisis	64	69	65	72	29
Pneumonia.....	70	69	69	66	46
Disease of the heart.....	42	51	52	55	40
Apoplexy.....	28	25	25	24	26
Cancer.....	13	18	21	23	19
Typhoid fever	1	.....	3	4	2
Diphtheria.....	13	3	4	6	11
Meningitis	19	18	26	16	17
Principal foreign nativity represented among deaths	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	25-29 yrs.	30-34 yrs.	55-59 yrs.	{ 35-39 yrs. 40-44 yrs. }	30-34 yrs.
Births.....	675	653	716	697	715
Birth rate per 1,000.....	24.4	26.8	28.9	27.6	27.8
Per cent of ward population...	2.4	2.6	2.8	2.7	2.7
One in every.....	41	37	34	36	35
Excess of births over deaths	172	184	236	224	216
Excess of births over deaths under 1 year.....	561	546	608	597	598
*Nativity of greatest number of foreign-born fathers.....	Ireland.	U. S.†	Ireland.	{ U. S.† Ireland. }	Ireland.
*Nativity of greatest number of foreign-born mothers	Ireland.	U. S.†	Ireland.	{ U. S.† Ireland. }	Ireland.
Per cent of whole number of births in the city.....	4.2	4.1	4.1	4+	4.1

* See footnote, Ward I.

† Outside of Boston.

Ward XVIII. (Part of Roxbury.)

AREA (land), 220 acres.
 Dwelling houses, 2,135.
 Persons to a dwelling, 10.9.
 Density of population, 106.2.
 Dwellings to the acre, 10.9.

POPULATION, 23,380.
 Males, 11,461; females, 11,919.
 Native born, 15,794.
 Foreign born, 7,586.
 Per cent of native born to
 ward population, 67.55.
 Per cent of foreign born to
 ward population, 32.45.

Ward Statistics of Deaths and Births.

Deaths, 444. $\left\{ \begin{array}{l} \text{Males, 242.} \\ \text{Females, 202.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 4.4.
 Per cent of ward population,
 1.9.
 Death rate, 19.4 per 1,000 of
 population.
 Deaths under 1 year, 125.
 Per cent of total mortality of
 the city under 1 year, 5.4.

Births, 610. $\left\{ \begin{array}{l} \text{Males, 301.} \\ \text{Females, 309.} \end{array} \right.$
 Birth rate, 26+ per 1,000.
 Per cent of ward population,
 2.6.
 One in every 38.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.— This ward is nearly all low land, much of it made by filling, the grade for the major part of the ward being about 18; an exceedingly small part, lying south of Roxbury street, as far as Bartlett street, is well elevated; it is practically a residential district, and its death rate is nearly the same as the rate of the city.

Comparative Vital Statistics, 1904-1908.

WARD XVIII.	1904.	1905.	1906.	1907.	1908.
Deaths	404	388	408	451	444
Per cent of total mortality of residents of the city	4.28	4.0	4+	4.68	4.4
Per cent of ward population	1.63	1.7	1.8	1.9	1.9
One in every	61	56	55	50	52
Death rate per 1,000 of population	16.3	17.5	18.09	19.6	19.4
Deaths under 1 year	94	94	84	107	125
Per cent of total mortality of residents of the city under 1 year	5.04	4.9	4+	5.3	5.4
Principal causes of death:					
Phthisis	60	55	55	50	60
Pneumonia	55	55	49	51	61
Diseases of the heart	45	55	47	64	52
Apoplexy	16	19	21	22	20
Cancer	9	10	22	19	12
Typhoid fever		1	6	1	3
Diphtheria	10	5	3	10	6
Meningitis	11	20	16	27	16
Principal foreign nativity represented among deaths	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year	30-34 yrs.	40-44 yrs.	60-64 yrs.	35-39 yrs.	50-54 yrs.
Births	583	585	627	620	610
Birth rate per 1,000	23.6	26.4	27.8	27	26+
Per cent of ward population	2.3	2.6	2.7	2.7	2.6
One in every	43	37	36	37	38
Excess of births over deaths	179	197	219	169	166
Excess of births over deaths under 1 year	489	491	543	513	485
*Nativity of greatest number of foreign-born fathers	U. S.†	U. S.†	U. S.†	{ U. S. Ireland. }	{ Ireland. }
*Nativity of greatest number of foreign-born mothers	U. S.† Ireland. }	U. S.†	U. S.†	{ U. S. Ireland. }	{ Ireland. }
Per cent of whole number of births in the city	3.7	3.7	3.6	3.5	3.5

* See footnote, Ward I.

† Outside of Boston.

Ward XIX. (Part of Roxbury.)

AREA (land), 760 acres.
 Dwelling houses, 2,916.
 Persons to a dwelling, 10.5.
 Density of population, 40.6.
 Dwellings to the acre, 3.8.

POPULATION, 30,859.
 Males, 14,566; females, 16,303.
 Native born, 19,987.
 Foreign born, 10,872.
 Per cent of native born to
 ward population, 64.76.
 Per cent of foreign born to
 ward population, 35.24.

Ward Statistics of Deaths and Births.

Deaths, 477. {Males, 221.
 {Females, 256.
 Per cent of total mortality of
 residents of the city, 4.7.
 Per cent of ward population,
 1.5.
 Death rate, 15.4 per 1,000 of
 population.
 Deaths under 1 year, 103.
 Per cent of total mortality of
 the city under 1 year, 4.4.

Births, 747. {Males, 385.
 {Females, 362.
 Birth rate, 24.2 per 1,000.
 Per cent of ward population,
 2.4.
 One in every 41.

Principal causes of death: Pneumonia, phthisis, diseases of the heart.

Principal foreign nationality represented among deaths: Ireland.

Topography.—The general characteristic of the land lying within the boundaries of this ward can be considered as high. Parker Hill, on whose summit at grade 219 the city has a reservoir, is here located. About one-third of the ward, that portion lying north of Longwood avenue, averages about 18 feet above mean low water.

The percentage of deaths in the ward to the total mortality of the city is high, as is also the percentage of infant mortality. There are upwards of 200 acres of park area within the limits of the ward; the death rate for the ward is below that for the city at large.

Comparative Vital Statistics, 1904-1908.

WARD XIX.	1904.	1905.	1906.	1907.	1908.
Deaths.....	448	483	501	499	477
Per cent of total mortality of residents of the city.....	4.74	4.9	5+	4.94	4.7
Per cent of ward population....	1.49	1.6	1.6	1.6	1.5
One in every.....	66	60	59	60	64
Death rate per 1,000 of population.....	14.9	16.5	16.8	16.4	15.4
Deaths under 1 year.....	94	109	112	100	103
Per cent of total mortality of residents of the city under 1 year.....	5.04	5.7	5.2	5.1	4.4
Principal causes of death:					
Phthisis.....	54	60	68	73	53
Pneumonia.....	71	69	62	54	68
Diseases of the heart.....	49	53	68	57	51
Apoplexy.....	17	25	17	27	26
Cancer.....	14	18	23	22	21
Typhoid fever.....	2	1	4	3	6
Diphtheria.....	10	4	5	4	13
Meningitis.....	14	10	24	23	24
Principal foreign nativities represented among deaths....	Ireland. } Germany. }	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	40-44 yrs.	60-64 yrs.	30-34 yrs.	40-44 yrs.	60-64 yrs.
Births.....	806	812	860	852	747
Birth rate per 1,000.....	26.9	27.7	28.8	28.1	24.2
Per cent of ward population....	2.6	2.7	2.8	2.7	2.4
One in every.....	37	50	34	36	41
Excess of births over deaths....	358	329	359	353	270
Excess of births over deaths under 1 year.....	712	703	742	752	644
*Nativity of greatest number of foreign-born fathers.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
*Nativity of greatest number of foreign-born mothers.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Per cent of whole number of births in the city.....	5.1	5.1	5+	4.9	4.3

* See footnote, Ward I.

Ward XX. (Part of Dorchester.)

AREA (land), 1,716 acres.
 Dwelling houses, 6,178.
 Persons to a dwelling, 7.1.
 Density of population, 25.7.
 Dwellings to the acre, 3.6.

POPULATION, 44,119.
 Males, 20,103; females, 24,016.
 Native born, 32,688.
 Foreign born, 11,431.
 Per cent of native born to
 ward population, 74.09.
 Per cent of foreign born to
 ward population, 25.91.

Ward Statistics of Deaths and Births.

Deaths, 579. { Males, 284.
 { Females, 295.
 Per cent of total mortality of
 residents of the city, 5.7.
 Per cent of ward population,
 1.3.
 Death rate, 13.1 per 1,000 of
 population.
 Deaths under 1 year, 100.
 Per cent of total mortality of
 the city under 1 year, 4.3.

Births, 1,054. { Males, 547.
 { Females, 507.
 Birth-rate, 23.8 per 1,000.
 Per cent of ward population,
 2.3.
 One in every 41.

Principal causes of death: Diseases of the heart, pneumonia, apoplexy.

Principal foreign nationality represented among deaths: Ireland.

Topography.—The land generally speaking can be called high, all the territory being high above tide water. Several elevations here exist at heights of 130 to 160 feet above low water; between these hills are the consequent depressions, one of them being on either side of Geneva avenue, from Bowdoin street to Dorchester avenue.

The lowest portion of the ward, known as "Calf Pasture," lies easterly of the New York, New Haven & Hartford Railroad, and is at marsh level. Its area is comparatively small.

This ward has the largest population of any in the city, its area is fourth in size, and it is a fine residential section. The death rate for the ward was much below that of the city.

Comparative Vital Statistics, 1904-1908.

WARD XX.	1904.	1905.	1906.	1907.	1908.
Deaths.....	503	546	577	600	579
Per cent of total mortality of residents of the city.....	5.38	5.6	5.7	5.94	5.7
Per cent of ward population....	1.40	1.3	1.3	1.3	1.3
One in every.....	74	76	73	72	76
Death rate per 1,000 of population.....	14	13.06	13.5	13.8	13.1
Deaths under 1 year.....	79	83	112	104	100
Per cent of total mortality of residents of the city under 1 year.....	4.24	4.3	5.2	5.2	4.3
Principal causes of death:					
Phthisis.....	58	61	45	67	43
Pneumonia.....	65	60	60	65	60
Diseases of the heart.....	59	79	75	77	78
Apoplexy.....	34	37	40	51	49
Cancer.....	16	38	35	45	35
Typhoid fever.....	4	2	8	3	5
Diphtheria.....	13	11	3	8	9
Meningitis.....	14	19	16	22	11
Principal foreign nativities represented among deaths...	Ireland. B.-A. Prov.	Ireland. B.-A. Prov.	Ireland. B.-A. Prov.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	60-64 yrs.	70-74 yrs.	60-64 yrs.	60-64 yrs.	50-59 yrs.
Births.....	849	828	975	1,128	1,054
Birth rate per 1,000.....	23.6	19.7	22.9	26	23.8
Per cent of ward population....	2.3	1.9	2.2	2.6	2.3
One in every.....	42	50	43	38	41
Excess of births over deaths...	346	282	398	528	475
Excess of births over deaths under 1 year.....	770	745	863	1,024	954
*Nativity of greatest number of foreign-born fathers.....	Boston.	U. S.†	U. S.†	{ U. S.† B.-A. Prov. }	B.-A. Prov.
*Nativity of greatest number of foreign-born mothers.....	Boston.	U. S.†	Boston.	{ U. S.† B.-A. Prov. }	B.-A. Prov.
Per cent of whole number of births in city.....	5.3	5.2	5.7	6.5	6.1

* See footnote, Ward I.

† Outside of Boston.

Ward XXI. (Part of Roxbury.)

AREA (land), 640 acres.
 Dwelling houses, 3,587.
 Persons to a dwelling, 7.8.
 Density of population, 43.7.
 Dwellings to the acre, 5.6.

POPULATION, 28,030.
 Males, 12,166; females, 15,864.
 Native born, 20,028.
 Foreign born, 8,002.
 Per cent of native born to
 ward population, 71.45.
 Per cent of foreign born to
 ward population, 28.55.

Ward Statistics of Deaths and Births.

Deaths, 431. $\left\{ \begin{array}{l} \text{Males, 230.} \\ \text{Females, 201.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 4.2.
 Per cent of ward population,
 1.5.
 Death rate, 15.3 per 1,000 of
 population.
 Deaths under 1 year, 72.
 Per cent of total mortality of
 the city under 1 year, 3.1.

Births, 549. $\left\{ \begin{array}{l} \text{Males, 292.} \\ \text{Females, 257.} \end{array} \right.$
 Birth rate, 19.5 per 1,000.
 Per cent of ward population,
 1.9.
 One in every 51.

Principal causes of death: Diseases of the heart, pneumonia, apoplexy.

Principal foreign nationality represented among deaths: Ireland.

Topography.— The land is nearly all well elevated above tide water, at points to elevations of 130, 140, 150 and 182 feet, with good drainage. A large proportion of the houses are single and detached; there is about 14 acres of park area and 4 acres of cemetery area within the ward limits. The infant mortality was low, and the death rate for the ward much below the rate for the city at large.

Comparative Vital Statistics, 1904-1908.

WARD XXI.	1904.	1905.	1906.	1907.	1908.
Deaths.....	388	386	387	383	431
Per cent of total mortality of residents of the city.....	4.12	3.9	3.8	3.79	4.2
Per cent of ward population....	1.47	1.4	1.4	1.3	1.5
One in every.....	67	68	69	71	65
Death rate per 1,000 of population.....	14.7	14.5	14.3	13.9	15.3
Deaths under 1 year.....	53	47	53	35	72
Per cent of total mortality of residents of the city under 1 year.....	2.84	2.6	2.5	1.7	3.1
Principal causes of death:					
Phthisis.....	45	30	36	29	29
Pneumonia.....	42	48	46	39	54
Diseases of the heart.....	50	66	56	89	70
Apoplexy.....	30	32	28	33	45
Cancer.....	11	22	24	21	26
Typhoid fever.....	5	5	1	1	2
Diphtheria.....	4	3	5	3	6
Meningitis.....	8	8	14	11	7
Principal foreign nativities represented among deaths....	Ireland. } B.-A. Prov.	Ireland. }	Ireland. } B.-A. Prov.	Ireland. } B.-A. Prov.	Ireland. }
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	60-64 yrs.	75-79 yrs.	65-69 yrs.	70-74 yrs.	65-69 yrs.
Births.....	455	448	514	548	549
Birth rate per 1,000.....	17.2	16.8	19.01	19.9	19.5
Per cent of ward population....	1.7	1.6	1.9	1.9	1.9
One in every.....	58	59	52	50	51
Excess of births over deaths....	67	62	127	165	118
Excess of births over deaths under 1 year.....	402	401	461	513	477
*Nativity of greatest number of foreign-born fathers.....	U. S.†	U. S.†	U. S.†	{ U. S. } { B.-A. Prov. }	{ B.-A. Prov. }
*Nativity of greatest number of foreign-born mothers.....	Boston.	U. S.†	Boston.	{ U. S. } { B.-A. Prov. }	{ B.-A. Prov. }
Per cent of whole number of births in city.....	5.3	2.7	3+	3.1	3.1

* See footnote, Ward I.

† Outside of Boston.

Ward XXII. (Part of Roxbury.)

AREA (land), 760 acres.
 Dwelling houses, 3,309.
 Persons to a dwelling, 8.8.
 Density of population, 38.5.
 Dwellings to the acre, 4.3.

POPULATION, 29,287.
 Males, 13,790; females, 15,497.
 Native born, 19,580.
 Foreign born, 9,707.
 Per cent of native born to
 ward population, 66.83.
 Per cent of foreign born to
 ward population, 33.17.

Ward Statistics of Deaths and Births.

Deaths, 460. { Males, 237.
 { Females, 223.
 Per cent of total mortality of
 residents of the city, 4.5.
 Per cent of ward population,
 1.5.
 Death rate, 15.7 per 1,000 of
 population.
 Deaths under 1 year, 94.
 Per cent of total mortality of
 the city under 1 year, 4.5.

Births, 718. { Males, 383.
 { Females, 335.
 Birth rate, 24.5 per 1,000.
 Per cent of ward population,
 2.4.
 One in every 40.

Principal causes of death: Diseases of the heart, pneumonia, phthisis.

Principal foreign nationality represented among deaths: Ireland.

Topography.—A part of Roxbury and West Roxbury, including the districts known as Egleston square and Jamaica Plain. The territory is high and healthy, and, excepting the depression existing along the line of Stony brook, there are no low areas. The death rate is much lower than the rate for the city at large.

Comparative Vital Statistics, 1904-1908.

WARD XXII.	1904.	1905.	1906.	1907.	1908.
Deaths.....	386	381	376	389	460
Per cent of total mortality of residents of the city.....	4.11	3.8	3.7	3.79	4.5
Per cent of ward population....	1.36	1.3	1.3	1.3	1.5
One in every.....	73	85	75	73	63
Death rate per 1,000 of population.....	13.6	13.7	13.3	13.5	15.7
Deaths under 1 year.....	74	64	81	35	94
Per cent of total mortality of residents of the city under 1 year.....	4.02	3.2	3.8	1.7	4.5
Principal causes of death:					
Phthisis.....	38	43	40	40	47
Pneumonia.....	47	49	44	51	54
Diseases of the heart.....	52	60	57	69	63
Apoplexy.....	16	19	11	19	18
Cancer.....	4	22	13	16	34
Typhoid fever.....	2	6	5	5	24
Diphtheria.....	9	2	8	6	14
Meningitis.....	18	9	6	11	19
Principal foreign nativities represented among deaths....	Ireland. } Germany. }	Ireland.	Ireland.	{ Ireland. Germany. }	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	35-39 yrs.	60-64 yrs.	50-54 yrs.	60-64 yrs.	{ 55-59 yrs. 60-64 yrs. }
Births.....	641	689	710	732	718
Birth rate per 1,000.....	22.6	24.8	25.1	25.4	24.5
Per cent of ward population....	2.2	2.4	2.5	2.5	2.4
One in every.....	44	41	39	39	40
Excess of births over deaths....	255	308	334	343	258
Excess of births over deaths under 1 year.....	567	628	629	697	624
*Nativity of greatest number of foreign-born fathers....	Ireland.	U. S.†	U. S.†	{ U. S.† Ireland. }	Ireland.
*Nativity of greatest number of foreign-born mothers....	Ireland.	U. S.†	Ireland.	{ U. S. Ireland. }	Ireland.
Per cent of whole number of births in the city.....	4.1	4.3	4.1	4.2	4.1

* See footnote, Ward I.

† Outside of Boston.

Ward XXIII. (West Roxbury.)

AREA (land), 7,617 acres.
Dwelling houses, 4,340.
Persons to a dwelling, 6.4.
Density of population, 3.6.
Dwellings to the acre, 1.8.

POPULATION, 27,905.
Males, 13,361; females, 14,544.
Native born, 19,783.
Foreign born, 8,122.
Per cent of native born to ward population, 70.89.
Per cent of foreign born to ward population, 29.11.

Ward Statistics of Deaths and Births.

Deaths, 390. { Males, 195.
 { Females, 195.
Per cent of total mortality of residents of the city, 3.8.
Per cent of ward population, 1.4.
Death rate, 14 per 1,000 of population.
Deaths under 1 year, 66.
Per cent of total mortality of the city under 1 year, 2.9.

Births, 617. { Males, 309.
 { Females, 308.
Birth rate, 22.1 per 1,000.
Per cent of ward population, 2.2.
One in every 45.

Principal causes of death: Phthisis, diseases of the heart, pneumonia.

Principal foreign nationality represented among deaths: Ireland.

Topography.—The entire ward is comparatively high above mean low water, reaching at one point a height over 300 feet above same, the highest land within the city limits. The land is generally well disposed for drainage purposes, with the exception of the territory between Roslindale and Forest Hills, along the course of Stony brook, where there is a depression, with grades about 38 and 40.

This is the largest ward, territorially, in the city. It contains 687 acres of park area and 478 acres of cemeteries. The rate of infant mortality is low; the death rate for the ward is much below that for the city at large.

Comparative Vital Statistics, 1904-1908.

WARD XXIII.	1904.	1905.	1906.	1907.	1908.
Deaths.....	322	325	378	409	390
Per cent of total mortality of residents of the city.....	3.41	3.3	3.7	4.05	3.8
Per cent of ward population.....	1.23	1.2	1.4	1.4	1.4
One in every.....	81	81	71	67	71
Death rate per 1,000 of population.....	12.3	12.3	14.04	14.9	14
Deaths under 1 year.....	52	59	60	71	66
Per cent of total mortality of the residents of city under 1 year.....	2.84	3.1	2.8	3.1	2.9
Principal causes of death:					
Phthisis.....	39	36	47	44	49
Pneumonia.....	24	49	51	48	44
Diseases of the heart.....	41	41	57	58	45
Apoplexy.....	26	19	30	15	22
Cancer.....	15	18	19	26	26
Typhoid fever.....	5	2	.....	2	19
Diphtheria.....	7	3	4	8	4
Meningitis.....	7	7	15	25	11
Principal foreign nativity represented among deaths.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	70-74 yrs.	60-64 yrs.	65-69 yrs.	75-79 yrs.	60-64 yrs.
Births.....	495	519	575	604	617
Birth rate per 1,000.....	19	19.2	21.3	22	22.1
Per cent of ward population.....	1.9	1.9	2.1	2.2	2.2
One in every.....	52	50	46	45	43
Excess of births over deaths...	173	194	197	195	227
Excess of births over deaths under 1 year.....	443	460	515	533	551
*Nativity of greatest number of foreign-born fathers.....	U. S.†	U. S.†	U. S.†	{ U. S. Ireland. }	Ireland.
*Nativity of greatest number of foreign-born mothers.....	Boston.	U. S.†	Boston.	{ U. S. Ireland. }	Ireland.
Per cent of whole number of births in the city.....	3.1	3.2	3.3	3.4	3.5

* See footnote, Ward I.

† Outside of Boston.

Ward XXIV. (Part of Dorchester.)

AREA (land), 2,252 acres.
Dwelling houses, 5,093.
Persons to a dwelling, 6.5.
Density of population, 14.8.
Dwellings to the acre, 2.2.

POPULATION, 33,435.
Males, 15,813; females, 17,622.
Native born, 24,465.
Foreign born, 8,970.
Per cent of native born to
ward population, 73.17.
Per cent of foreign born to
ward population, 27.83.

Ward Statistics of Deaths and Births.

Deaths, 446. { Males, 223.
 { Females, 223.
Per cent of total mortality of
residents of the city, 4.4.
Per cent of ward population,
1.3.
Death rate, 13.3 per 1,000 of
population.
Deaths under 1 year, 102.
Per cent of total mortality of
the city under 1 year, 4.

Births, 757. { Males, 381.
 { Females, 376.
Birth rate, 22.6 per 1,000.
Per cent of ward population,
2.2.
One in every 44.

Principal causes of death: Diseases of the heart, pneumonia, phthisis.

Principal foreign nationality represented among deaths: Ireland.

Topography.—Like Ward 23, this ward is generally well elevated above tide water, one of the hills rising to a height of 180 feet. Between the hills lie the valleys, the one lying just south of Franklin Field being comparatively low. The only actually low territory in the ward is at Neponset, where the grade falls to a minimum of 15 feet above low water.

There are above 100 acres of park area, and upwards of 60 acres of cemetery land within the ward limits. The rate of infant mortality was comparatively very low, as was also the total death rate of the ward, compared with that of the city at large.

Comparative Vital Statistics, 1904-1908.

WARD XXIV.	1904.	1905.	1906.	1907.	1908.
Deaths	412	404	430	440	446
Per cent of total mortality of residents of the city.....	4.36	4.1	4.3	4.36	4.4
Per cent of ward population....	1.37	1.2	1.3	1.3	1.3
One in every.....	72	78	75	74	68
Death rate per 1,000 of population.....	13.7	12.7	13.3	13.3	13.3
Deaths under 1 year.....	82	59	94	74	102
Per cent of total mortality of residents of the city under 1 year.....	4.30	3.1	4.4	3.2	4.0
Principal causes of death:					
Phthisis	38	58	25	43	34
Pneumonia.....	32	35	51	54	40
Diseases of the heart.....	50	46	61	78	63
Apoplexy.....	27	47	31	29	31
Cancer.....	17	14	25	28	24
Typhoid fever.....	7	4	2	2	3
Diphtheria.....	7	6	4	7	9
Meningitis.....	10	11	15	10	11
Principal foreign nativities represented among deaths ...	Ireland. B.-A.Prov.	Ireland. B.-A.Prov.	Ireland.	{ Ireland. B.-A. Prov. }	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	65-69 yrs.	65-69 yrs.	70-74 yrs.	75-79 yrs.	70-74 yrs.
Birth.....	671	671	750	803	757
Birth rate per 1,000.....	22.4	21.2	23.2	24.4	22.6
Per cent of ward population....	2.2	2.1	2.3	1.9	2.2
One in every.....	44	47	43	40	44
Excess of births over deaths...	259	267	320	363	311
Excess of births over deaths under 1 year.....	589	612	656	729	655
*Nativity of greatest number of foreign-born fathers.....	U. S.†	U. S.†	U. S.†	{ U. S.† B.-A. Prov. }	B.-A. Prov.
*Nativity of greatest number of foreign-born mothers....	Boston.	U. S.†	U. S.†	{ U. S.† B.-A. Prov. }	B.-A. Prov.
Per cent of whole number of births in the city.....	4.2	4.2	4.3	4.6	4.3

* See footnote, Ward I.

† Outside of Boston.

Ward XXV. (Brighton.)

AREA (land), 2,740 acres.
 Dwelling houses, 4,116.
 Persons to a dwelling, 5.5.
 Density of population, 8.3.
 Dwellings to the acre, 1.5.

POPULATION, 23,002.
 Males, 11,001; females, 12,001.
 Native born, 16,201.
 Foreign born, 6,801.
 Per cent of native born to
 ward population, 70.43.
 Per cent of foreign born to
 ward population, 29.57.

Ward Statistics of Deaths and Births.

Deaths, 302. $\left\{ \begin{array}{l} \text{Males, 152.} \\ \text{Females, 150.} \end{array} \right.$
 Per cent of total mortality of
 residents of the city, 2.9.
 Per cent of ward population,
 1.3.
 Death rate, 13.1 per 1,000 of
 population.
 Deaths under 1 year, 62.
 Per cent of total mortality of
 the city under 1 year, 2.7.

Births, 650. $\left\{ \begin{array}{l} \text{Males, 332.} \\ \text{Females, 318.} \end{array} \right.$
 Birth rate, 28.2 per 1,000.
 Per cent of ward population,
 2.8.
 One in every 35.

Principal causes of death: Diseases of the heart, phthisis, pneumonia.

Principal foreign nationality represented among deaths: Ireland.

Topography.—The territory of this ward is largely well elevated, some points rising to over 200 feet above mean low water.

The depressions existing south of North Beacon street are but minor ones, scarcely worth considering in connection with the general natural features of the ward.

From the territory lying north of the Boston & Albany Railroad, at a grade of about 25 or 30 feet, the land falls gradually to the banks of the Charles river.

The rate of infant mortality and the general death rate of the ward are very low.

Comparative Vital Statistics, 1904-1908.

WARD XXV.	1904.	1905.	1906.	1907.	1908.
Deaths	278	291	313	317	302
Per cent of total mortality of residents of the city	2.95	2.9	3.1	3.12	2.9
Per cent of ward population	1.30	1.3	1.4	1.4	1.3
One in every	76	74	70	71	76
Death rate per 1,000 of population.....	13	13.3	14.1	14+	13.1
Deaths under 1 year.....	45	66	74	75	62
Per cent of total mortality of residents of the city under 1 year.....	2.47	3.4	3.4	3.2	2.7
Principal causes of death:					
Phthisis	34	27	33	23	38
Pneumonia	32	32	43	47	37
Diseases of the heart.....	33	46	47	56	40
Apoplexy.....	12	13	18	22	14
Cancer	4	17	11	20	10
Typhoid fever	6	5	2	.....	7
Diphtheria.....	4	5	10	3	5
Meningitis	18	13	11	17	9
Principal foreign nativity represented among deaths.....	Ireland.	Ireland.	Ireland.	Ireland.	Ireland.
Age period in which occurred greatest number of deaths of residents other than under 1 year.....	50-54 yrs.	55-59 yrs.	55-59 yrs.	65-69 yrs.	2-5 yrs.
Births.....	521	557	597	625	650
Birth rate per 1,000	24.5	25.5	26.9	27.6	28.2
Per cent of ward population	2.4	2.5	2.6	2.7	2.8
One in every	40	39	37	36	35
Excess of births over deaths	243	266	284	308	348
Excess of births over deaths under 1 year.....	476	491	523	550	588
*Nativity of greatest number of foreign-born fathers.....	U. S.†	U. S.†	U. S.†	{ U. S. Ireland. }	Ireland.
*Nativity of greatest number of foreign-born mothers.....	Ireland.	U. S.†	U. S.†	{ U. S. Ireland. }	Ireland.
Per cent of whole number of births in the city.....	3.3	3.5	3.4	3.5	3.7

* See footnote, Ward I.

† Outside of Boston.

SUMMARY OF GREATEST AND LEAST IN THE POINTS ENUMERATED IN THE PRECEDING WARD STATISTICS.

Area and Population.

- Ward having the greatest area, Ward 23, 7,617 acres.
 " " least area, Ward 8, 166 acres.
 " " greatest population, Ward 20, 44,119.
 " " least population, Ward 4, 13,198.
 " " greatest number of males, Ward 20, 20,103.
 " " least number of males, Ward 4, 6,650.
 " " greatest number of females, Ward 20, 24,016.
 " " least number of females, Ward 5, 6,094.
 Wards having an excess of males in population, Wards 2, 3, 4, 5, 6, 7, 8, 9, 13.
 Wards having an excess of females in population, Wards 1, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.
 Ward having greatest native-born population, Ward 20, 32,688.
 " least native-born population, Ward 5, 8,752.
 " greatest foreign-born population, Ward 6, 19,342.
 " least foreign-born population, Ward 4, 3,998.
 Wards having an excess of foreign-born population, Wards 6, 8.
 Greatest per cent of native born to ward population, Ward 20, 74.09.
 Least per cent of native born to ward population, Ward 6, 38.93.
 Ward having greatest number of dwelling houses, Ward 20, 6,178.
 Ward having least number of dwelling houses, Ward 7, 1,197.
 Ward having greatest number of persons to a dwelling, Ward 6, 21.2.
 Ward having least number of persons to a dwelling, Ward 25, 5.5.
 Ward having greatest number of persons to the acre, Ward 8, 195.7.
 Ward having least number of persons to the acre, Ward 23, 3.6.
 Ward having greatest number of dwellings to the acre, Ward 8, 11.4.
 Ward having least number of dwellings to the acre, Ward 25, 1.5.

Mortality.

- Ward having greatest number of deaths, Ward 6, 655.
 " least number of deaths, Ward 4, 225.
 " greatest infant mortality, Ward 6, 234.
 " least infant mortality, Ward 11, 30.
 " highest mortality rate, Ward 7, 21.4.
 " lowest mortality rate, Ward 11.
 Ward having the greatest number of deaths from phthisis, Ward 17, 73.

Ward having the greatest number of deaths from pneumonia,
Ward 6, 174.

Ward having the greatest number of deaths from diseases of the
heart, Ward 20, 78.

Ward having the greatest number of deaths from meningitis,
Ward 6, 34.

Ward having the greatest number of deaths from apoplexy,
Ward 20, 49.

Ward having the greatest number of deaths from kidney dis-
eases, Ward 20, 39.

Ward having the greatest number of deaths from cancer,
Ward 22, 34.

Ward having the greatest number of deaths from diphtheria,
Ward 13, 14.

Ward having the greatest number of deaths from cholera
infantum, Ward 6, 29.

Ward having the greatest number of deaths from scarlet fever,
Ward 8, 11.

Births.

Ward having greatest number of births, Ward 6, 1,888.

“ least number of births, Ward 5, 305.

“ greatest number of male births, Ward 6, 938.

“ least number of male births, Ward 5, 157.

“ greatest number of female births, Ward 6, 950.

“ least number of female births, Ward 5, 148.

“ greatest birth rate per thousand, Ward 6, 59.6.

“ least birth rate per thousand, Ward 10, 13.3.

TABLE A.—WARD STATISTICS: MORTALITY, MORTALITY RATES, BIRTHS AND BIRTH RATES, 1908.

DEATHS.						BIRTHS.					WARD.				
WARD.	Totals.	Males.	Females.	Per cent of Whole Number of Deaths of Residents.	Per cent of Ward Population.	Death Rate per Thousand.	Deaths Under One Year of Age.	Per cent of Whole Number of Deaths Under One Year.	Totals.	Males.		Females.	Birth Rate per Thousand.	Per cent of Ward Population.	One in Every.
1.....	424	220	204	4.2	1.5	15.8	115	5.4	721	344	377	27.3	2.7	37	1.....
2.....	430	235	195	4.2	1.4	15.7	130	5.6	989	523	466	36.1	3.6	27	2.....
3.....	280	140	140	2.7	1.7	17.8	56	2.4	410	212	198	26.2	2.6	38	3.....
4.....	225	118	107	2.2	1.7	17+	42	1.8	372	196	176	28.1	2.8	35	4.....
5.....	254	138	116	2.5	1.8	18.9	54	2.3	305	157	148	22.7	2.2	43	5.....
6.....	655	359	296	6.5	2+	20.6	234	10.2	1,888	938	950	59.6	5.9	16	6.....
7.....	354	196	158	3.5	2.1	21.4	78	3.4	452	236	216	27.4	2.7	36	7.....
8.....	409	232	177	4+	1.2	12.5	94	4.1	1,235	608	627	38.0	3.8	26	8.....
9.....	455	263	192	4.5	1.9	19.5	104	4.5	803	419	384	34.4	3.4	29	9.....
10.....	307	139	168	3.0	1.2	12.2	46	2+	335	175	160	13.3	1.3	75	10.....
11.....	280	119	161	2.7	1.1	11.8	30	1.3	369	187	182	15.6	1.5	63	11.....
12.....	354	182	172	3.5	1.5	15.4	48	2+	401	224	177	17.4	1.7	57	12.....
13.....	486	267	219	4.8	2.1	21.2	150	6.5	750	370	380	32.7	3.2	30	13.....
14.....	389	206	183	3.8	1.6	16.6	92	4.0	637	322	315	27.2	2.7	36	14.....
15.....	357	170	187	3.5	1.6	16.6	93	4.0	525	268	257	24.9	2.4	40	15.....
16.....	334	170	164	3.3	1.4	14.4	70	3.0	556	304	252	24.0	2.4	41	16.....
17.....	499	248	251	4.9	1.9	19.4	117	5.1	715	351	364	27.8	2.7	35	17.....
18.....	444	242	202	4.4	1.9	19.4	125	5.4	610	301	309	26+	2.6	38	18.....
19.....	477	221	256	4.7	1.5	15.4	103	4.4	747	385	362	24.2	2.4	41	19.....
20.....	579	284	295	5.7	1.3	13.1	100	4.3	1,054	547	507	23.8	2.3	41	20.....
21.....	431	230	201	4.2	1.5	15.3	72	3.1	549	292	257	19.5	1.9	51	21.....
22.....	460	237	223	4.5	1.5	15.7	94	4.5	718	383	335	24.5	2.4	40	22.....
23.....	390	195	195	3.8	1.4	14+	66	2.9	617	309	308	22.1	2.2	45	23.....
24.....	446	223	223	4.4	1.3	13.3	102	4.0	757	381	376	22.6	2.2	44	24.....
25.....	302	152	150	2.9	1.3	13.1	62	2.7	650	332	318	28.2	2.8	35	25.....

TABLE B.—WARD STATISTICS: AREAS, DWELLINGS, DENSITY, POPULATION, SEXES, NATIVE AND FOREIGN BORN.

WARD.	Land (Area. in Acres).	Dwellings.	Persons to a Dwelling.	Density of Population.	Dwellings to the Acre.	Population of Ward.	Males.	Females.	Native Born.	Foreign Born.	Percent of Na- tive Born to Ward Popu- lation.	Percent of For- eign Born to Ward Popu- lation.	WARD.
1.....	1,188	3,262	8.2	23.6	2.7	26,836	13,239	13,597	17,830	9,006	66.44	33.56	1.....
2.....	357	2,250	12.1	76.5	6.3	27,339	14,863	12,476	15,184	12,155	55.53	44.47	2.....
3.....	332	1,643	8.1	47.1	4.9	15,649	7,845	7,804	11,235	4,414	71.79	28.21	3.....
4.....	301	1,808	7.3	43.8	6.0	13,198	6,650	6,548	9,200	3,998	69.71	30.29	4.....
5.....	205	1,227	10.9	65.3	5.9	13,387	7,293	6,094	8,752	4,635	65.36	34.64	5.....
6.....	293	1,494	21.2	108.1	5.1	31,676	17,498	14,178	12,334	19,342	38.93	61.07	6.....
7.....	394	1,197	13.8	41.7	3+	16,466	9,500	6,966	8,955	7,511	54.38	45.62	7.....
8.....	166	1,909	17.0	195.7	11.4	32,493	17,743	14,750	13,922	18,571	42.84	57.16	8.....
9.....	186	1,891	12.3	125.3	10.1	23,317	12,074	11,243	13,555	9,762	58.13	41.87	9.....
10.....	394	2,149	11.7	63.8	5.5	25,139	11,339	13,800	18,033	7,106	71.73	28.27	10.....
11.....	638	3,084	7.6	36.9	4.8	23,568	8,918	14,650	15,672	7,896	66.49	33.51	11.....
12.....	235	2,329	9.8	97.6	9.9	22,940	10,143	12,797	15,754	7,186	68.67	31.33	12.....
13.....	604	2,148	10.6	37.8	3.5	22,877	11,829	11,048	13,311	9,566	58.11	41.89	13.....
14.....	385	2,533	9.2	60.7	6.5	23,380	11,614	11,766	15,916	7,464	68.07	31.93	14.....
15.....	243	2,387	8.9	88.1	9.8	21,431	10,358	11,073	14,899	6,352	69.52	30.48	15.....
16.....	564	2,491	9.2	41+	4.4	23,128	10,910	12,218	16,690	6,438	72.16	27.84	16.....
17.....	423	2,570	9.9	60.6	6+	25,642	12,381	13,261	17,300	8,342	67.46	32.54	17.....
18.....	220	2,135	10.9	106.2	10.9	23,380	11,461	11,919	15,794	7,586	67.55	32.45	18.....
19.....	760	2,916	10.5	40.6	3.8	30,859	14,566	16,303	19,987	10,872	64.76	35.24	19.....
20.....	1,716	6,178	7.1	25.7	3.6	44,119	20,103	24,016	32,688	11,431	74.09	25.91	20.....
21.....	640	3,587	7.8	43.7	5.6	28,030	12,166	15,864	20,028	8,002	71.45	28.55	21.....
22.....	760	3,309	8.8	38.5	4.3	29,287	13,790	15,497	19,580	9,707	66.83	33.17	22.....
23.....	7,617	4,340	6.4	3.6	1.8	27,905	13,361	14,544	19,783	8,122	70.89	29.11	23.....
24.....	2,252	5,093	6.5	14.8	2.2	33,435	15,813	17,622	24,465	8,970	73.17	27.83	24.....
25.....	2,740	4,116	5.5	8.3	1.5	23,002	11,001	12,001	16,201	6,801	70.43	29.57	25.....

NUMBER OF BIRTHS, MARRIAGES, MARRIAGE INTENTIONS, DEATHS AND
POPULATION RECORDED FROM 1849 TO 1908, WITH ALL ADDITIONS
AND CORRECTIONS TO DATE.

YEAR.	Births.	Marriages.	Marriage Intentions.	Deaths.	Population.
1849	5,094	*768	2,287	5,332	132,048
1850	5,304	2,543	2,557	3,668	136,881
1851	5,369	2,896	2,953	3,856	141,308
1852	5,341	2,735	2,877	3,736	145,878
1853	5,637	2,875	3,092	4,284	150,595
1854	5,727	3,170	3,329	4,443	155,464
1855	5,849	2,902	3,061	4,085	160,494
1856	5,962	2,615	2,914	4,258	163,820
1857	5,927	2,496	2,683	3,959	167,218
1858	5,677	2,235	2,318	3,841	170,685
1859	5,973	2,531	2,629	3,738	174,227
1860	5,902	2,531	2,618	4,391	177,840
1861	5,830	2,173	2,300	3,965	180,646
1862	5,354	2,142	2,256	4,126	183,497
1863	5,288	2,364	2,505	4,701	186,390
1864	5,019	2,802	2,960	5,115	189,331
1865	5,365	2,773	2,866	4,551	192,318
1866	5,577	2,877	3,019	4,382	194,506
1867	5,929	2,938	3,200	4,422	227,523
1868	7,426	3,255	3,578	5,520	231,024
1869	7,452	3,391	3,874	5,524	246,541
1870	8,151	3,529	3,991	6,100	250,526
1871	8,583	3,770	4,288	5,892	258,032
1872	9,357	3,859	4,424	8,091	265,764
1873	9,777	3,945	4,459	7,869	321,200
1874	11,801	4,092	4,690	7,813	331,395
1875	11,147	3,490	3,988	8,958	341,919
1876	10,884	3,010	3,391	8,203	346,004
1877	10,636	2,917	3,348	7,284	350,138
1878	10,303	3,069	3,450	7,677	354,322
1879	10,387	3,240	3,656	7,435	358,554
1880	10,770	3,673	4,182	8,613	362,839

* Marriage record of 1849 began July 26. Intentions, January 1.

NUMBER OF BIRTHS, ETC. — *Concluded.*

YEAR.	Births.	Marriages.	Marriage Intentions.	Deaths.	Population.
1881.....	10,673	4,076	4,549	9,097	368,190
1882.....	11,155	4,240	4,756	9,017	373,620
1883.....	11,431	4,343	4,880	9,747	379,129
1884.....	11,627	4,197	4,699	9,623	384,720
1885.....	11,622	4,277	4,766	9,622	390,393
1886.....	12,106	4,503	5,130	9,265	401,374
1887.....	12,346	4,832	5,451	10,077	412,663
1888.....	12,841	4,959	5,745	10,200	424,274
1889.....	13,043	5,211	5,862	10,259	436,208
1890.....	13,395	5,299	6,029	10,180	448,477
1891.....	14,598	5,519	6,302	10,573	457,772
1892.....	15,234	5,731	6,516	11,244	467,260
1893.....	14,801	5,771	6,564	11,713	476,945
1894.....	15,585	5,472	6,251	11,531	486,830
1895.....	15,780	5,952	6,799	11,331	496,920
1896.....	16,547	6,318	7,043	11,650	516,305
1897.....	17,003	6,064	6,790	11,170	528,912
1898.....	16,702	5,908	6,535	10,903	541,827
1899.....	16,289	6,197	6,975	11,178	555,057
1900.....	16,468	6,054	6,912	11,671	560,892
1901.....	16,011	6,319	7,009	11,306	574,634
1902.....	16,017	6,175	6,973	11,002	588,713
1903.....	16,045	6,641	7,426	10,654	603,136
1904.....	16,286	6,737	7,503	10,757	617,913
1905.....	15,907	6,777	7,846	11,007	595,380
1906.....	17,226	7,376	8,316	11,415	606,216
1907.....	18,403	7,764	8,654	11,708	617,249
1908.....	18,347	6,993	7,798	11,756	628,483

Births.

YEAR.	Population.	Males.	Females.	Difference.*	Total.	Stillborn.	Total, Including Stillborn.	To Population, One in Every.
1849.....	132,048	2,607	2,487	+120	5,094	250	5,344	25.9
1850.....	136,881	2,696	2,608	+88	5,304	256	5,560	25.8
1851.....	141,308	2,808	2,561	+247	5,369	251	5,620	26.3
1852.....	145,878	2,669	2,672	—3	5,341	236	5,577	27.3
1853.....	150,595	2,837	2,800	+37	5,637	221	5,858	26.7
1854.....	155,464	2,959	2,768	+191	5,727	276	6,003	27.1
1855.....	160,494	3,022	2,827	+195	5,849	228	6,077	27.4
1856.....	163,820	3,068	2,894	+174	5,962	273	6,235	27.4
1857.....	167,218	3,001	2,926	+75	5,927	271	6,198	28.2
1858.....	170,685	2,889	2,788	+101	5,677	249	5,926	30.0
1859.....	174,227	3,045	2,928	+117	5,973	292	6,265	29.1
1860.....	177,840	2,988	2,914	+74	5,902	376	6,278	30.1
1861.....	180,646	3,018	2,812	+206	5,830	350	6,180	31.0
1862.....	183,497	2,741	2,613	+128	5,354	361	5,715	34.3
1863.....	186,390	2,722	2,566	+156	5,288	361	5,649	35.2
1864.....	189,331	2,655	2,364	+291	5,019	351	5,370	37.7
1865.....	192,318	2,759	2,603	+156	5,362	370	5,732	35.8
1866.....	194,506	2,829	2,748	+81	5,577	397	5,974	34.8
1867.....	227,523	2,996	2,933	+63	5,929	408	6,337	38.3
1868.....	231,024	3,753	3,673	+80	7,426	482	7,908	31.1
1869.....	246,541	3,811	3,641	+170	7,452	477	7,929	33.1
1870.....	250,526	4,188	3,963	+225	8,151	504	8,655	30.7
1871.....	258,032	4,377	4,206	+171	8,583	543	9,126	30.1
1872.....	265,764	4,755	4,602	+153	9,357	560	9,917	28.4
1873.....	321,200	4,950	4,827	+123	9,777	515	10,292	32.8
1874.....	331,395	6,077	5,724	+353	11,801	642	12,443	28.1
1875.....	341,919	5,718	5,429	+289	11,147	541	11,688	30.7
1876.....	346,004	5,613	5,271	+342	10,884	491	11,375	31.8
1877.....	350,138	5,380	5,256	+124	11,636	469	12,105	33.0
1878.....	354,322	5,286	5,017	+269	10,303	447	10,750	34.4
1879.....	358,554	5,352	5,035	+317	10,387	457	10,844	34.5
1880.....	362,839	5,499	5,271	+228	10,770	435	11,205	33.7
1881.....	368,190	5,427	5,246	+181	10,673	548	11,221	34.6
1882.....	373,620	5,762	5,393	+369	11,155	520	11,675	33.6
1883.....	379,129	5,406	5,485	—79	10,891	509	11,400	33.2

* Excess of males marked thus +; of females, thus —.

Births.— *Concluded.*

YEAR.	Population.	Males.	Females.	Difference.*	Total.	Stillborn.	Total In- cluding Stillborn.	To Popula- tion. One in Every.
1884.....	384,720	5,966	5,661	+305	11,627	516	12,143	33.1
1885.....	390,393	6,022	5,600	+422	11,622	523	12,145	33.6
1886.....	401,374	6,253	5,853	+422	12,106	557	12,663	33.2
1887.....	412,663	6,325	6,011	+314	12,336	535	12,871	33.5
1888.....	424,274	6,622	6,219	+403	12,841	571	13,412	33.1
1889.....	436,208	6,811	6,232	+579	13,043	608	13,651	33.5
1890.....	448,477	6,883	6,512	+371	13,395	636	14,031	33.5
1891.....	457,772	7,378	7,113	+265	14,491	625	15,116	31.5
1892.....	467,260	7,631	7,603	+28	15,234	644	15,878	30.7
1893.....	476,945	7,576	7,225	+351	14,801	645	15,446	32.2
1894.....	486,830	8,003	7,582	+421	15,585	721	16,306	31.2
1895.....	496,920	8,021	7,759	+262	15,780	625	16,405	31.4
1896.....	516,305	8,469	8,078	+391	16,547	688	17,235	31.2
1897.....	528,912	8,624	8,379	+245	17,003	640	17,643	31.1
1898.....	541,827	8,405	8,297	+108	16,702	650	17,352	32.4
1899.....	555,057	8,337	7,952	+385	16,289	614	16,903	34.1
1900.....	560,892	8,443	8,025	+318	16,468	674	17,142	34.3
1901.....	574,634	8,163	7,847	+316	16,010	650	16,660	35.8
1902.....	588,713	8,192	7,861	+331	16,053	675	16,728	30.4
1903.....	603,136	8,226	7,816	+410	16,042	633	16,675	37.5
1904.....	617,913	8,284	8,000	+284	16,284	662	16,946	38.5
1905.....	595,380	8,298	7,608	+690	15,906	666	16,572	37.4
1906.....	606,216	8,809	8,416	+393	17,225	661	17,886	35.1
1907.....	617,249	9,303	9,100	+203	18,403	730	19,133	33.5
1908.....	628,483	9,368	8,979	+389	18,347	637	18,984	34.2

Deaths.

YEAR.	Population.	Males.	Females.	Difference.*	Total.	Stillborn.	Total.	Proportion to Population.	
								One in	Per cent.
1851.....	141,308	1,966	1,889	+77	3,855	251	4,106	37	2.70
1852.....	145,878	1,902	1,834	+68	3,736	236	3,972	39	2.56
1853.....	150,595	2,203	2,081	+122	4,284	221	4,505	35	2.84
1854.....	155,464	2,295	2,148	+148	4,443	243	4,686	35	2.85

* Excess of males marked thus +; of females, thus --.

Deaths.—Continued.

YEAR.	Population.	Males.	Females.	Difference.*	Total.	Stillborn.	Total.	Proportion to Population:	
								One in	Per cent.
1855.....	160,494	2,087	1,998	+89	4,085	228	4,313	39	2.43
1856.....	163,820	2,224	2,034	+188	4,258	273	4,531	38	2.60
1857.....	167,218	2,077	1,882	+195	3,959	271	4,230	42	2.37
1858.....	170,685	1,935	1,906	+29	3,841	249	4,090	44	2.25
1859.....	174,227	1,911	1,827	+84	3,738	292	4,030	47	2.20
1860.....	177,840	2,229	2,162	+67	4,391	†376	4,767	41	2.47
1861.....	180,646	1,957	2,008	—51	3,965	†350	4,315	46	2.19
1862.....	183,497	2,089	2,038	+51	4,127	361	4,488	45	2.25
1863.....	186,390	2,434	2,267	+167	4,701	361	5,062	40	2.52
1864.....	189,331	2,667	2,448	+219	5,115	351	5,466	37	2.70
1865.....	192,318	2,342	2,225	+117	†4,567	373	4,940	42	2.36
1866.....	194,506	2,234	2,148	+86	4,382	397	4,779	44	2.25
1867.....	227,523	2,263	2,159	+104	4,422	408	4,830	51	1.94
1868.....	231,024	2,862	2,658	+204	5,520	482	6,002	42	2.38
1869.....	246,541	2,774	2,750	+24	5,524	477	6,001	45	2.24
1870.....	250,526	3,105	2,995	+110	6,100	504	6,604	41	2.43
1871.....	258,032	2,959	2,933	+24	5,892	543	6,435	44	2.28
1872.....	265,764	4,218	3,873	+345	8,091	560	8,651	33	3.04
1873.....	321,200	4,099	3,770	+329	7,869	515	8,384	41	2.45
1874.....	331,395	3,957	3,856	+101	7,813	642	8,455	42	2.35
1875.....	341,919	4,504	4,454	+50	8,958	541	9,499	38	2.62
1876.....	346,004	4,110	4,093	+17	8,203	491	8,694	42	2.37
1877.....	350,138	3,680	3,604	+76	7,284	469	7,753	48	2.08
1878.....	354,322	3,741	3,936	—195	7,677	447	8,124	46	2.17
1879.....	358,554	3,675	3,760	—85	7,435	457	7,892	48	2.07
1880.....	362,839	4,210	4,403	—193	8,613	435	9,048	42	2.37
1881.....	368,190	4,574	4,523	+51	9,097	548	9,145	41	2.47
1882.....	373,620	4,495	4,522	—27	9,017	520	9,537	41	2.41
1883.....	379,129	4,866	4,881	—15	9,747	509	10,256	39	2.57
1884.....	384,720	4,819	4,804	+15	9,623	516	10,139	40	2.50
1885.....	390,393	4,826	4,796	+30	9,622	523	10,145	41	2.46
1886.....	401,374	4,677	4,588	+89	9,265	557	9,822	43	2.30
1887.....	412,663	5,096	4,981	+115	10,077	535	10,612	41	2.44
1888.....	424,274	5,162	5,038	+124	10,200	571	10,771	42	2.40

* Excess of males marked thus + ; of females, —.

† Approximate.

‡ Exclusive of ten soldiers who died at Gallop's Island and were not recorded until the year 1869.

Deaths.— *Concluded.*

YEAR.	Population.	Males.	Females.	Difference.*	Total.	Stillborn.	Total.	Proportion to Population.	
								One in	Per cent.
1889.....	436,208	5,246	5,013	+233	10,259	608	10,867	43	2.35
1890.....	448,477	5,119	5,061	+58	10,180	636	10,816	44	2.27
1891.....	457,772	5,381	5,192	+189	10,573	625	11,198	43	2.31
1892.....	467,260	5,664	5,579	+85	11,243	644	11,887	42	2.40
1893.....	476,945	6,016	5,697	+319	11,713	645	12,358	40	2.45
1894.....	486,830	5,988	5,543	+445	11,531	721	12,252	42	2.37
1895†.....	496,920	5,862	5,469	+393	11,331	625	11,956	43	2.28
1896.....	516,305	6,097	5,553	+544	11,650	688	12,338	44	2.25
1897.....	528,912	5,658	5,512	+146	11,170	640	11,810	47	2.11
1898.....	541,827	5,597	5,306	+291	10,903	650	11,553	50	2.00
1899.....	555,057	5,768	5,410	+358	11,178	614	11,792	50	2.00
1900.....	560,892	5,985	5,686	+299	11,671	671	12,342	47	2.08
1901.....	574,634	5,909	5,397	+512	11,306	650	11,956	51	1.96
1902.....	588,713	5,673	5,329	+344	11,002	675	11,677	53	1.86
1903.....	603,136	5,467	5,187	+280	10,654	633	11,287	57	1.76
1904.....	617,913	5,569	5,188	+381	10,757	661	11,418	57	1.74
1905.....	595,380	5,844	5,166	+678	11,010	665	11,675	54	1.84
1906.....	606,216	5,968	5,447	+521	11,415	661	12,076	53	1.88
1907.....	617,249	6,190	5,515	+675	11,705	730	12,435	49	2.01
1908.....	628,483	6,198	5,558	+640	11,756	637	12,393	53	1.87

* Excess of males marked thus +; of females, —.

• Population in 1895 according to Board of Health table is 501,083.

OUT OF TOWN MARRIAGES.

(4 Volumes.)

Year.	No.	Year.	No.	Year.	No.
1854 to 1867.....	290	1878.....	234	1890.....	617
1867.....	195	1879.....	262	1891.....	595
1868.....	164	1880.....	331	1892.....	681
1869.....	187	1881.....	388	1893.....	826
1870.....	209	1882.....	440	1894.....	779
1871.....	244	1883.....	430	1895.....	879
1872.....	280	1884.....	452	1896.....	921
1873.....	249	1885.....	456	1897.....	848
1874.....	244	1886.....	551	1898.....	840
1875.....	230	1887.....	539	1899.....	985
1876.....	198	1888.....	578	1900.....	1,010
1877.....	211	1889.....	594	1901.....	1,016

OUT OF TOWN DEATHS.

(3 Volumes.)

Year.	No.	Year.	No.	Year.	No.
1853.....	163	1870.....	54	1887.....	9
1854.....	142	1871.....	57	1888.....	8
1855.....	73	1872.....	55	1889.....	135
1856.....	103	1873.....	65	1890.....	136
1857.....	79	1874.....	23	1891.....	141
1858.....	88	1875.....	70	1892.....	202
1859.....	99	1876.....	37	1893.....	216
1860.....	90	1877.....	25	1894.....	219
1861.....	88	1878.....	25	1895.....	233
1862.....	99	1879.....	16	1896.....	277
1863.....	108	1880.....	27	1897.....	318
1864.....	107	1881.....	23	1898.....	400
1865.....	70	1882.....	19	1899.....	487
1866.....	56	1883.....	14	1900.....	445
1867.....	57	1884.....	24	1901.....	549
1868.....	55	1885.....	20		
1869.....	55	1886.....	15		



ANNUAL REPORT
OF THE
SCHOOLHOUSE DEPARTMENT
FOR THE YEAR ENDING JANUARY 31, 1909.

REPORT OF THE COMMISSIONERS.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

DEAR SIR,—In accordance with the provisions of chapter 473 of the Acts of 1901, the Board of Schoolhouse Commissioners submits herewith its seventh annual report, covering the period from February 1, 1908 to February 1, 1909.

I.

POWERS OF THE BOARD.

During the past year the Board has been subjected to a searching investigation by the Finance Commission of the City of Boston, and has profited by the wise criticism of that body. On the whole the suggestions made have been helpful and it is hoped that the efficiency of the work has been increased. Some of the investigations, as *e. g.*, into the cost of boiler repairs, referred to old conditions which had already been remedied. As the contractors involved appeared to have been dishonest, the investigation was necessary. Any investigation interferes somewhat with the routine of the department, and much of the usual summer work was

undertaken late and caused some inconvenience at the opening of the schools, which the Board regrets. The gain, however, has been substantial.

The Board, following the lines indicated in previous reports, has now firmly established the divisions that have charge of the engineering,—civil, heating and electrical,—and is prepared to establish the architectural division on an equally firm footing. When the Board employed engineers outside of the department for heating and electrical engineering, it paid sometimes as much as \$20,000 a year for service which was confined almost exclusively to new buildings. This work is now done by its own employees, whose pay roll in both branches is about \$16,290 a year. With this force all the new buildings now in hand, except the Mechanic Arts High, are being done, all the major repairs, and all the miscellaneous heating and electrical work of the department. Much of the salary paid is offset by a more efficient and more economical execution of the repair work.

The appropriation for new buildings is \$500,000 a year, and the architect's commission on this amount would be at least \$25,000. If the Finance Commission, as is presumed, were looking toward economy, it would be in line with this to make the architectural division as thoroughly efficient as the engineering divisions, and save a portion of the amount now paid out annually for architectural service. An increase of \$10,000 or \$12,000 in the present force would put this division on a basis that would enable them to handle all the new buildings and increase substantially the efficiency of the miscellaneous work now handled by the architectural division. This seems to be the logical step forward in the development of the department.

When the Board was first established, it was essential that it should have outside assistance in engineering and architecture, but in the seven years of its existence, with the help of an excellent firm of domestic engineers and some of the ablest architects in the city, the problems of school planning have been so carefully studied and systematized as to make it possible for the Board to undertake intelligently and efficiently all this work. It would not, of course, be possible to take over all this work at once, just as it was impossible to take over all the domestic engineering at once. Although Mr. Eveleth has been in charge of the heating and Mr. Hatch of the electrical work for nearly two years, Messrs. French and Hubbard are still employed by the Board on the Mechanic Arts High School, now approaching completion; but if a competent head were found for the architectural

division the Board could gradually take charge of this work and eventually execute the whole of it.

With a competent paid board in control, there would be no such danger as attended the office of City Architect, for the head of the architectural division would be appointed under a civil service examination, and the members of the Board would be, as now, directly responsible to your Honor.

Each year the Board has in its reports urged a larger appropriation for repairs, and now, in view of the fact that the appropriation for land and buildings makes no special provision for administration expenses, and the Board may be called upon to pay all of these out of the repair appropriation it seems essential that this should be increased. Quite apart from other considerations, it is desirable that the administration expenses should come out of one account, and not be divided arbitrarily between two; and the appropriation which comes from the tax levy for current expenditures seems the proper place for the total expenses of the department to appear.

For the actual needs of repairs and new equipment, the Board can, for the first time, report that the 25 cents on \$1,000 appears to be adequate, but it is not sufficient to cover the administration — some \$70,000 — as well. That the repair appropriation has not been overrun this year is due to the most rigid economy on the part of the Board, the elimination of every expense that could be either avoided or postponed, and improved methods in handling the work. In some of these matters the Board acknowledges with thanks the assistance and advice given by the Finance Commission. It is also due in part to the fact that repairs which come under the head of protection in case of fire, fire-proofing basements, fire-alarm signals, and fire escapes, to the amount of \$84,510.32 were paid out of a special appropriation taken from land and buildings. If proper provision can be made for administration expenses, the Board believes that the work of repair and new equipment can be cared for under the present appropriation.

II.

WORK EXECUTED UNDER THE APPROPRIATION FOR LAND AND BUILDINGS FOR SCHOOLS.

The work done this year by the Board will be considered under four heads:

1. Report of progress on buildings described last year and on the new work undertaken since then.

2. The revision of standards of cost to agree with reduced size of rooms.
3. Future accommodation.
4. Report on fire protection.

(1.) REPORT OF PROGRESS ON BUILDINGS DESCRIBED LAST YEAR, AND ON NEW BUILDINGS UNDERTAKEN SINCE THEN.

Of the items reported upon last year, eleven were connected with previous loans and six were the items belonging to the appropriation for 1907-1908. The eleven were (1) Charlestown High School; (2) Normal group; (3) Dorchester High Annex; (4) High School of Commerce; (5) Quincy Manual Training School; (6) Blackinton; (7) Dudley district; (8) Longfellow Addition; (9) Robert G. Shaw District, Mt. Vernon Street and Germantown; (10) Bennett District, addition to Hobart Street School; (11) Edward Everett District.

Of these the Dorchester High Annex, the Blackinton, the Dudley, the Longfellow Addition and the Edward Everett are provided for in the 1908-09 list, and are reported on later. On the Charlestown High, the Normal Group, the Quincy Manual Training School and the Bennett nothing remains but to report the final figures, which are as follows:

(a.) *The Charlestown High School:*

	Original Contracts.	Final Contracts.
General contract . . .	\$239,137 00	\$229,022 79
Granite contract . . .	67,000 00	67,033 00
	<u>\$306,137 00</u>	<u>\$296,055 79</u>

(b.) *The Normal Group:*

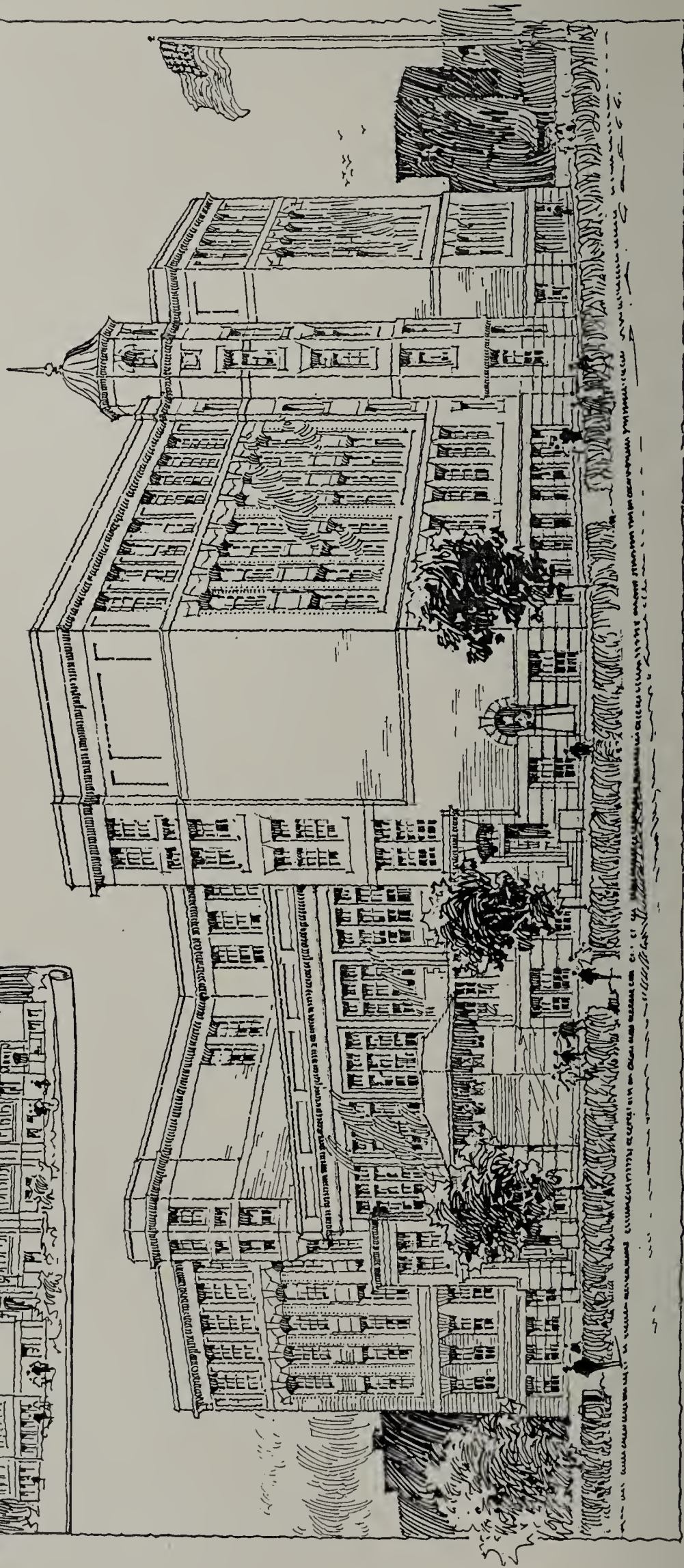
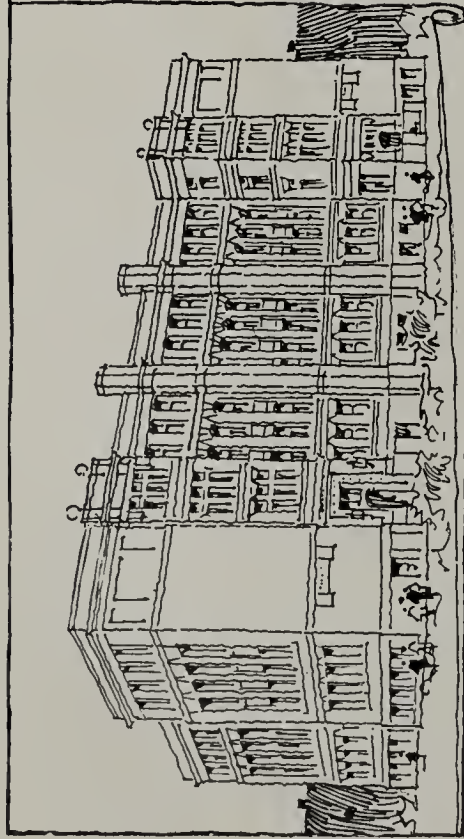
	Original Contracts.	Final Contracts.
General contract . . .	\$663,980 00	\$678,450 93
Heating contract . . .	45,882 00	61,974 64
Plumbing contract . . .	29,062 00	32,128 91
Electric contract . . .	20,360 00	30,462 78
	<u>\$759,284 00</u>	<u>\$803,017 26</u>

(c.) *The Quincy Manual Training School:*

	Original Contracts.	Final Contracts.
General contract . . .	\$13,796 00	\$15,616 17

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 WINTHROP · BRIMMER DISTRICT · BOSTON · A.W. LONGFELLOW ARCHT.



ABRAHAM LINCOLN SCHOOL, FERDINAND STREET.

A. W. LONGFELLOW, Architect.

(d.) The Bennett District Elementary School:

	Original Contracts.	Final Contracts.
General contract . . .	\$9,200 00	\$10,554 24
Heating contract . . .	1,052 00	1,190 00
	<u>\$10,252 00</u>	<u>\$11,744 24</u>

This leaves only the High School of Commerce and the Robert G. Shaw, Germantown. On the former the Board reports that as yet the School Committee has taken no action locating the new building and no appropriation has been asked for. With the erection of the Brimmer-Winthrop School, it is possible that the Winthrop site, or a new site purchased with the proceeds of the sale of the Winthrop and Mason street properties, might be available for the new High School of Commerce.

In the Robert G. Shaw District land has been voted by the Board, but the taking has not been made by the Street Commissioners, owing to the fact that the Board inadvertently voted more land (over two acres) than is legally permissible, and it is necessary to run new lines. This will be settled shortly.

The list of items furnished by the School Committee for 1907-08 is as follows:

	Pupils.
1. Agassiz district, elementary school, lower grades, .	264
2. Wells district, elementary school, lower grades, .	300
3. Bennett district, elementary school, lower grades, .	100
4. Adams district elementary school, lower grades, .	200
5. Prince district, high school (Mechanic Arts High School)	800
6. Phillips district, elementary school, upper grades .	880
7. Edward Everett district, elementary school, upper grades	616
8. Brimmer district, elementary school, upper grades .	1,496

On June 29, 1907, as previously reported (Report of 1907-08, page 8), the Board returned the list of items, with the appropriation for each item, as follows:

<i>Item No. 1.</i> — Agassiz district, elementary school, upper grades (building and furnishing) . . .	\$62,000
<i>Item No. 2.</i> — Wells district, elementary school, lower grades (building and furnishing) . . .	50,000
<i>Item No. 3.</i> — Bennett district, elementary school, lower grades (building and furnishing) . . .	15,000
<i>Carried forward</i>	<u>\$127,000</u>

<i>Brought forward</i>	\$127,000
<i>Item No. 4.</i> — Adams district, elementary school, lower grades (building and furnishing)	15,000
<i>Item No. 5.</i> — Prince district, high school (Mechanic Arts High School) (building and furnishing)	500,000
<i>Item No. 6.</i> — Phillips district, elementary school, upper grades (land, building and furnishing)	358,000
	<u>\$1,000,000</u>

Items Nos. 7 and 8 were thereby eliminated as the six items exhausted the available appropriation.

Item 1.— Formerly the *Agassiz district*, now the *Francis Parkman*. The cost of this to date was reported last year. The figures to date are:

	Original Contracts.	Contracts to Date.
Building contract	\$32,400 00	\$34,404 36
Plumbing contract	1,750 00	2,059 55
Heating contract	6,077 00	6,067 00
Electrical contract	4,692 00	4,454 81
	<u>\$44,919 00</u>	<u>\$46,985 72</u>

The building was completed and occupied September 9, 1908. The needed additional yard room was obtained by the purchase of approximately 10,200 square feet, adjoining on the north, for which a settlement has not yet been made, but for which \$4,500 has been set aside. This was taken care of by tailings from the old appropriations. This land will be graded and made available for use by the school in the spring

The building is now a complete school of upper elementary grade. There are 40,219 square feet in the lot; the building contains fourteen class-rooms, six of the old and eight of the new standard size (one of the former is now used as a kindergarten), a cooking room on the top floor, a manual training room in the basement and an assembly hall. The total cost of the building to date (three different building operations) was \$119,869.86. With 620 pupils, this is \$193.33 per pupil, a high cost for a building of second class construction.

Item 2.— *Wells district*. * A six-room addition to the Winchell School. This was reported complete last year.

Item 3.— *Bennett district*. * A two-room addition to the Hobart Street School. This was reported complete last year.

Item 4.— *Adams district*. * Four portables in the Plummer yard. This was reported complete last year.

* This work, both drawings and superintendence, was done in the office of the Schoolhouse Department, and there was therefore no commission and no charge for clerk of the works.

Item 5.—The Mechanic Arts High School. As reported last year, this work is due to be completed February 22, 1909. The class rooms were completed and furnished January 1, 1909, and were occupied after the Christmas recess. The heating and electric plants were completed by November, 1908, and delivered to the School Committee in January, 1909. The alterations in the old building are now under way, and the whole of the work, both new building and old, will probably be completed on time. The amounts of the original contracts and the contracts to date are as follows:

	* Original Contracts.	*Contracts to Date.
Building contract	\$346,191 00	\$344,122 63
Heating contract	53,400 00	53,910 73
Plumbing contract	23,878 00	24,823 97
Electrical contract	32,250 00	33,294 00
	<u>\$455,719 00</u>	<u>\$456,151 33</u>

The completed building, erected at three different times, has cost \$648,564.09 to date, and accommodates 1,200 pupils. The portions built first were of second class construction, the new portion is first class. The cost per pupil is \$540.47. This includes laboratory but not shop equipment.

Item 6.—Phillips district.—The Finance Commission reported strongly in favor of locating a school on the embankment. The School Committee and the Superintendent, individually, expressed themselves in favor of this, provided another building could be given on the hill. The Park Department withdrew their opposition. By an act of the Legislature, chapter 524 of the Acts of 1908, this Board was authorized:

“To meet the expense of providing increased facilities for egress from school buildings in the City of Boston by means of the construction of fire escapes and otherwise, and of making alterations in existing school buildings in that city so as to render the occupants of said buildings less liable to injury in case of fire, the Board of Schoolhouse Commissioners of the city may use such portions of the appropriations heretofore made for furnishing additional accommodation for pupils in the various school districts, under the provisions of chapter 450 of the Acts of the year 1907 as the said Board of Schoolhouse Commissioners may certify in a writing, approved by the Mayor of the city, will remain unexpended after the additional accommodations for which said appropriations were made shall have been provided.”

* Including \$22,773 done before the contract was approved.

In view of these facts the Board, acting with the knowledge and approval of the School Committee, set aside \$115,000 of the \$358,000 appropriated under this item for the fire protection. The expenditure under this head is reported on later. With the balance they purchased land on Joy and South Russell streets, assigned to the building as architect Mr. James T. Kelley, who had been previously appointed for a West End item, and authorized him to proceed with plans for an eighteen-room, lower grade building.* This completes the items on the list of 1907-09.

The new loan for 1908-09, in accordance with chapter 450 of the Acts of 1907, was again \$1,000,000. On March 19, 1908, the School Committee designated the following districts as those where new accommodations was needed:

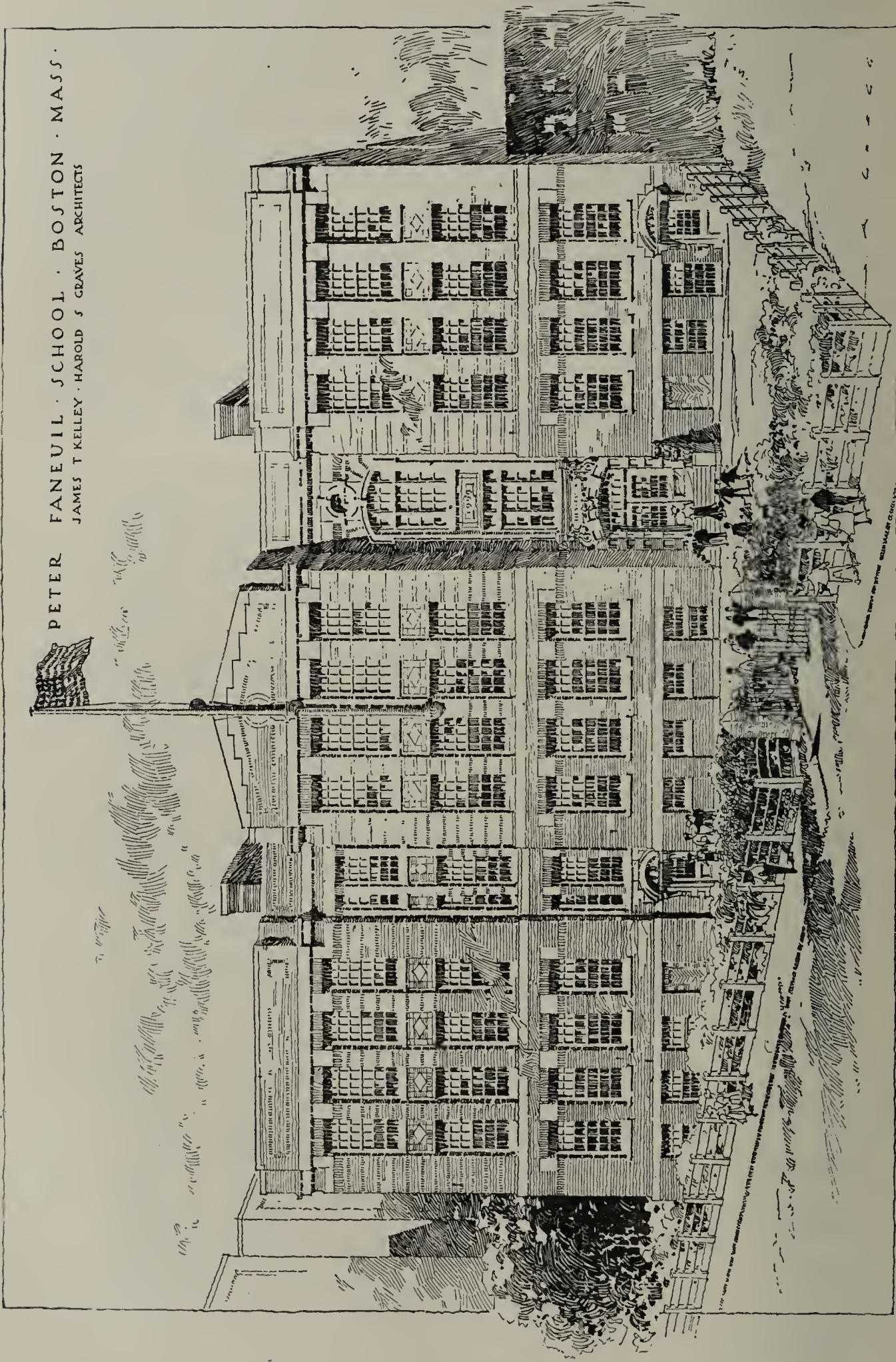
	Pupils.
1. Edward Everett district, elementary school, upper grades	616
2. Brimmer district, elementary school, upper grades, ...	1,760
3. Eliot district, administrative office	
4. Blackinton district, elementary school, upper grades	704
5. Dudley district, elementary school, lower grades	528
6. Henry L. Pierce district, high school (Dorchester High)	420
7. Longfellow district, elementary school, lower grades, ...	352

On March 20, 1908, the Board returned this list, with the amounts of each item up to and including a total expenditure of \$1,000,000, as follows:

1. Edward Everett district, elementary school, upper grades	\$125,000
2. Brimmer district, elementary school, upper grades	450,000
3. Eliot district, administrative office	5,000
4. Blackinton district, elementary school, upper grades	140,000
5. Dudley district, elementary school, lower grades	105,000
6. Henry L. Pierce district, high school, (Dorchester High)	125,000
7. Longfellow district, elementary school, lower grades	50,000
	<u>\$1,000,000</u>

* The original item was a twenty-two room, upper elementary, *i. e.*, 880 pupils. As changed, with the knowledge and consent of the School Committee, it is an eighteen-room, lower elementary for 720 pupils.

PETER FANEUIL SCHOOL · BOSTON · MASS ·
 JAMES T KELLEY · HAROLD S GRAVES ARCHITECTS



PETER FANEUIL SCHOOL, JOY AND SOUTH RUSSELL STREETS.

JAMES T. KELLEY, Architect.

For plans see page 73.

Item 1.— The Edward Everett district, an elementary school, upper grades. This school has been reported for the last three years. Last year it was stated that, the appropriation not being sufficient to cover the last two items on the list sent down by the School Committee, of which this item was one, it was necessarily postponed and would undoubtedly appear on the list for the year 1907–08. It was the first item mentioned on this year's list. As reported last year, land was taken for this school on March 20, 1907, and Mr. E. T. P. Graham was appointed architect on September 26, 1906. Immediately upon receipt of the new list from the School Committee, the plans were completed and the building was let in a single contract covering all trades on July 16, 1908, to John F. Griffin & Co. in the sum of \$123,400. The limit set for this building on the basis of a fourteen-room, upper elementary, with two rooms allowed for the hall was a sixteen-room building, with 30,000 cubic feet per room, and 22 cents per cubic foot, or \$105,600. The lowest bid was \$123,400. As this was far in excess of the amount allowed, the contractor, the architect and the engineers eliminated everything that could possibly be dispensed with, and when the contract was signed an order of deduction of \$18,331 was made, putting the cost practically at the limit. At present figures it makes about \$189.85 per pupil. Besides the fourteen class rooms the building will contain a cooking room, a manual training room and an assembly hall. It will be named the Edward Everett School. The work is progressing rapidly and is due to be completed on May 17, 1909.

	Original Contract.	Contract to Date.
General contract	<u>\$123,400 00</u>	<u>\$106,317 66</u>

Item 2.— Brimmer district, elementary school, upper grades. This item appeared on the School Committee's list of 1907, but as the appropriation was insufficient it was postponed and appears on this year's list in the second place, with the accommodation increased from 1,496 to 1,760, that is, from 34 to 40 rooms. The Board voted, August 18, 1908, to appoint A. W. Longfellow architect of this building, and plans are now under way and nearly complete. As reported more fully under Item 6, \$10,000 was taken from this appropriation by a joint vote of the School Committee and the Board of Schoolhouse Commissioners in order to increase the accommodation in the Dorchester High Annex. It seemed likely, therefore, that the amount remaining might prove insufficient for the purchase of the land—

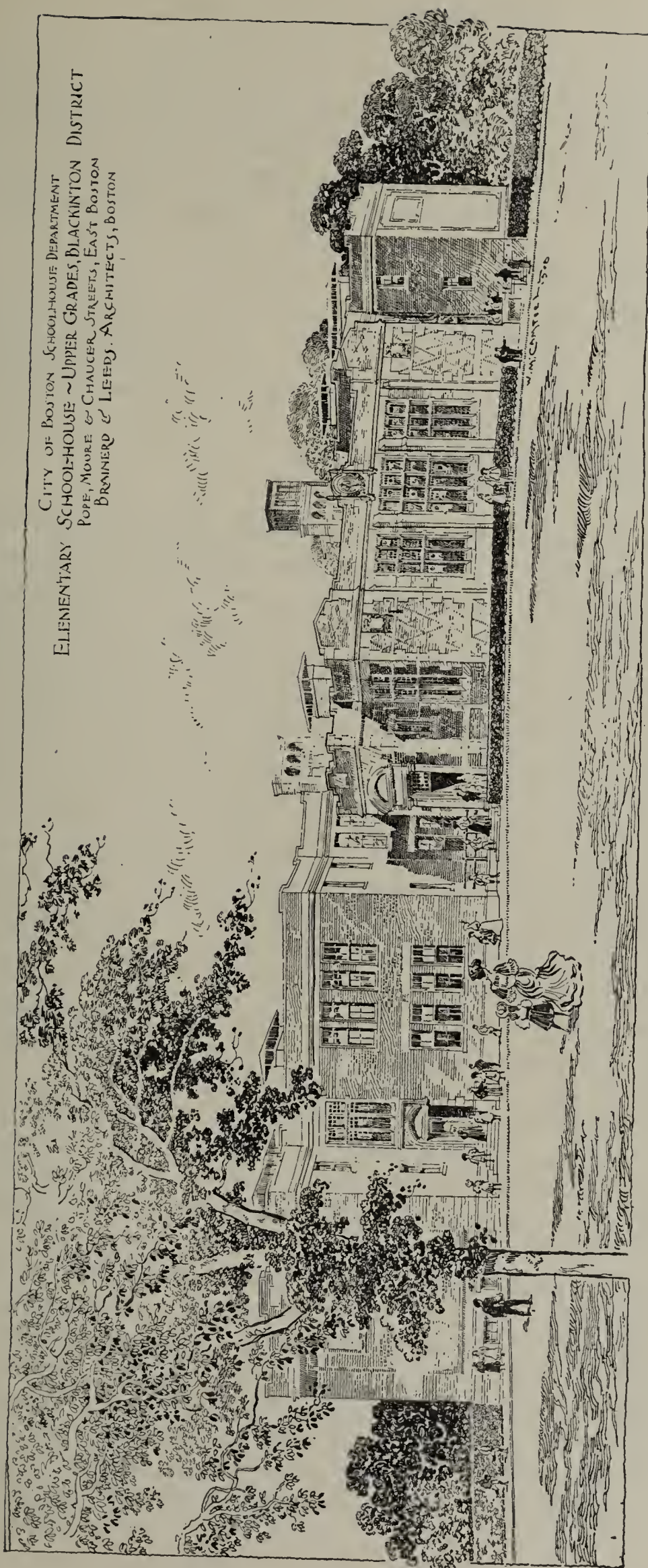
which was an uncertain element—and the erection of a building of the size required. The plans have been completed on the basis of forty rooms, which is the number required for 1,760 pupils. Nine rooms, three on each floor, are approximately the old standard and will accommodate about fifty pupils each, so that the building will seat more than the required number. The building will be used for both boys and girls, to take the pupils of the Brimmer and Winthrop Schools.

On June 2, 1908, the Board voted to advertise for land in the district designated by the School Committee, and on June 19 bids were received. The Board voted on August 1 to request the Street Commissioners to take certain land on Ferdinand, Knox, Fayette, Melrose and Bay streets, and a taking of this land was made on August 28, 1908. This lot contains about 37,870 square feet. The Board hopes that it will be possible to pay for the land and build the building with the balance of the appropriation remaining, \$440,000. The building will be named the Abraham Lincoln School.

Item 3.—Eliot district, administrative office. Plans and specifications for this building were made in the office of the Board and all superintendence was done by the architectural department, so that there was no extra expense for these items. On March 27, 1908, the contract for this building was awarded to William Crane, in the sum of \$4,036. The work was completed July 1, 1908, and the building occupied on September 9, 1908.

	Original Contract.	Completed Contract.
Building contract	<u>\$4,036 00</u>	<u>\$4,256 93</u>

Item 4.—Blackinton district, elementary school, upper grades. Land was advertised for and, as stated on page 6 of last year's report, a taking was made on August 15, 1907, of 53,986 square feet of land on Moore and Chaucer streets, East Boston. The cost of this land was \$29,246.40. No further action was taken at that time as the building did not appear on the list of 1907-08. When the new list was received the matter was again taken up, and Messrs. Brainerd & Leeds were appointed architects on April 24, 1908. Plans were drawn and specifications submitted, and contracts have been awarded as follows: General contract on November 9, 1908, to C. H. Belledeu, in the sum of \$81,392; the plumbing contract on November 23, to Pierce & Cox, in the sum of \$4,875; the electric contract on December 30, to the M. B. Foster Electric Company, in the sum of \$4,844, and the heating contract on January 21,



ELLEMENTARY
CITY OF BOSTON SCHOOL-HOUSE DEPARTMENT
SCHOOL-HOUSE ~ UPPER GRADES, BLACKINTON
POPE, MOORE & CHAUCER STREETS, EAST BOSTON
BRAINERD & LEEDS, ARCHITECTS, BOSTON
DISTRICT

BISHOP CHEVERUS SCHOOL, POPE, MOORE AND CHAUCER STREETS, EAST BOSTON.
BRAINERD & LEEDS, Architects.

For plans see page 77.

1909, to J. J. Hurley & Co., in the sum of \$11,795. This building will accommodate 704 pupils and will contain sixteen class rooms, manual training room, cooking room and assembly hall. It will be named the Bishop Cheverus School. The contracts to date are as follows:

	Original Contracts.	Contracts to Date.
General contract	\$81,392 00	\$81,432 00
Heating contract	11,795 00	11,795 00
Plumbing contract	4,875 00	4,866 00
Electric contract	4,844 00	4,844 00
	<u>\$102,906 00</u>	<u>\$102,937 00</u>

This building, on the basis of a sixteen-room, upper elementary, with an assembly hall, was rated at eighteen rooms, 30,000 cubic feet per room and 22 cents per cubic foot, or \$118,800. It has been let considerably below this amount and the cost per pupil will be in the neighborhood of \$160.84. This was figured at a very favorable market, and it is not likely that these prices will be readily duplicated.

Item 5.—Dudley district, elementary school, lower grades. Land for this school was advertised for on January 31, 1907, but no taking was made (see page 6 report of 1907–08). As the building did not appear on the list of the School Committee for 1907 nothing further was done in the matter at that time, but on May 9, 1908, it having appeared on the list of 1908–09, it was voted to ask the Street Commissioners to take the Tetlow estate on Cedar street, Roxbury, containing 34,760 square feet. This land was taken on July 24, and \$12,500 was paid. On July 10, 1908, the Board voted to ask the Street Commissioners to take a certain parcel of land adjoining the former parcel, containing 11,151 square feet, in order to enlarge the school lot making a total of 45,911 square feet. This was done on September 18, and \$4,870 was paid, a total of \$17,370. On May 11, 1908, Messrs. Parker, Thomas & Rice were appointed architects of this building, a twelve-room, lower grade, elementary, to accommodate 528 pupils. Plans have been completed and contracts have been let as follows: General contract to Antony Varnerin, October 30, 1908, in the sum of \$54,765; the heating contract to Huey Brothers Company, in the sum of \$6,667; the plumbing contract to Bresnahan Brothers on November 16, in the sum of \$3,368, and the electric contract to the M. B. Foster Electric Company in the sum of \$2,520.

The work of blasting and excavation is going on and the building is due to be completed on September 9, 1909.

The original contracts and the contracts to date are as follows:

	Original Contracts.	Contracts to Date.
General contract	\$54,765 00	\$54,765 00
Heating contract	6,667 00	6,667 00
Plumbing contract	3,368 00	3,368 00
Electric contract	2,520 00	2,520 00
	\$67,320 00	\$67,320 00

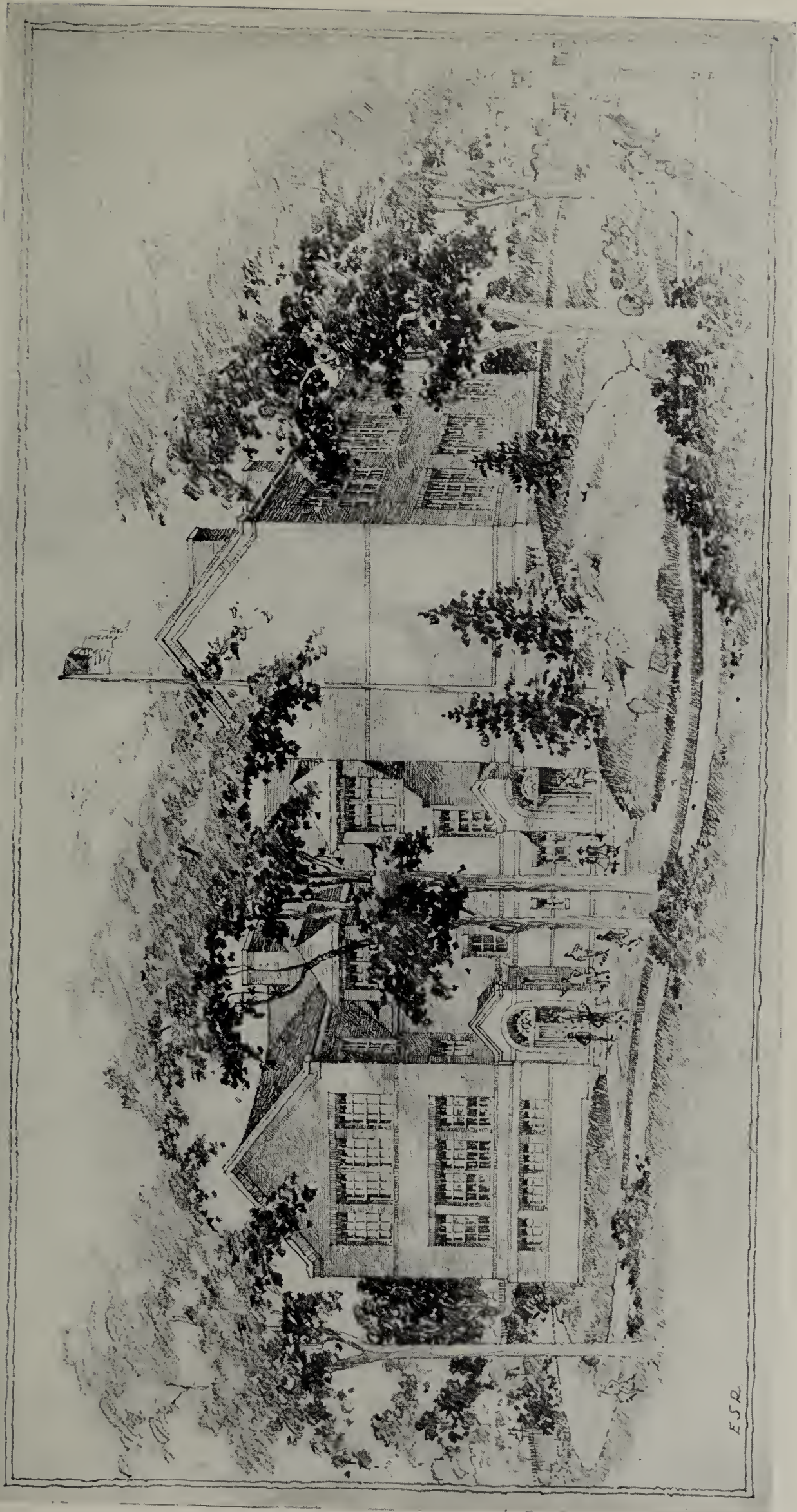
This building, as a twelve-room lower elementary, was rated at twelve, 30,000 cubic feet and 22 cents per cubic foot, making a total of \$79,200. Again, as in Item 4, the contracts are considerably below this limit, and the cost per pupil is \$140.26. This was let under the same favorable circumstances at as Item 4.

This school will be named the Nathan Hale School.

Item 6.—Henry L. Pierce district, high school (Dorchester High Annex). This has been reported for the last two years (page 5, report of 1907–08). Land was taken on June 16, 1905, and three portable buildings were placed on the lot for temporary accommodation. On the receipt of the list of 1908 from the School Committee this building was again taken up, and Messrs. Hartwell, Richardson & Driver, the architects of the Dorchester High School, who had been appointed architects on June 20, 1905, were directed to continue with the work on the plans and specifications.

When the plans were submitted to the Superintendent, on the basis asked for by the School Committee, with accommodation for 420, he reported that in his judgment this accommodation was not sufficient, and the School Committee, in concurrence with this Board, voted to increase accommodation to 700, and to increase the appropriation to \$135,000 by transferring \$10,000 from the appropriation for the Brimmer District School, Item 2. The revised plans are now nearly complete. This will be an addition to the present building, and will contain eighteen class rooms and rooms for handicraft, wood and metal working and drawing. It is hoped that the building and its equipment can be kept within the appropriation, but the amount appears hardly adequate.

Item 7.—Longfellow district, elementary school, lower grades (addition to the Longfellow School). This item, as stated in last year's report, appeared as Item 34 of the list of 42



NATHAN HALE SCHOOL, CEDAR STREET, ROXBURY.

PARKER, THOMAS & RICE, Architects.

For plans see page 78.

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items furnished by the School Committee. (See page 9, first annual report, and page 13, report for 1907-08.) In consideration of other more pressing needs this was postponed until this year, when the School Committee's list shows it as the last item. Mr. C. Howard Walker was appointed architect; plans are being prepared and are nearly complete. Land had been already purchased, on November 14, 1902, containing 8,923 square feet, for which \$7,825 had been paid. The appropriation for building and furniture is \$50,000. On the basis of an eight-room building the allowance for building alone would be \$52,800, but as the building is an addition and has no basement nor independent heating apparatus it is hoped that it can be kept within the appropriation.

This completes the items on the list of 1908-09.

(2.) THE REVISION OF STANDARDS OF COST TO AGREE WITH REDUCED SIZE OF ROOMS.

The Board has now had a year's experimenting with the planning of schools for the new standard class room. It was hoped that in planning buildings with the smaller class rooms, seating 44* instead of 56,* economies in lighter steel and lower stud, added to those possible under the new building laws, lighter walls and wood frame for the roof, would offset the increased cost of a larger number of rooms with their fixed equipment for each. The first test, the new Edward Everett, did not justify this, for although it was planned compactly and designed as simply as the buildings previously erected the limit of \$105,600 was materially overrun by the lowest bid received. The Board cut out everything ornamental, everything in any way superfluous, and succeeded in getting the building down to the limit. With this example before it, the Board was more careful still with the two buildings that followed, the twelve-room, lower grade elementary, and the sixteen-room, upper grade elementary (the Dudley and the Blackinton, see pages 10 and 11). The figures on these buildings show that the limit was not impossible of attainment. Both buildings came well within the limit. The twelve-room elementary limit was \$79,200. (Slightly higher, it will be noted, than the old ten-room limit, \$77,000, although the number of pupils is practically the same in each, 10 by 50, and 12 by 40.) It was let for \$67,320. The sixteen-room, upper grade elementary, allowing two rooms for hall, was an eighteen-room limit, or \$118,800,

* In all cases where the report gives cost per pupil, the small rooms which accommodate 44 desks are rated at 40—just as in previous list the old standard rooms, accommodating 56 desks, were rated at 50.

and this is let for \$103,906. In both cases, therefore, the Board has succeeded in keeping to the previously established limit of cost per pupil. This was fixed (see report for 1906-07) at \$132 to \$154 for lower elementary and at \$174 to \$192 for upper elementary. Here the cost per pupil in the small lower elementary is \$140, nearly down to the limit for large buildings, and the cost per pupil in the upper elementary is \$162, which is below the low limit for large buildings. It is more than doubtful if this record can be continued, as all figures were low when these buildings were let. The Board feels justified, however, in setting the limit at 30,000 cubic feet per class room and 20 cents per cubic foot, instead of 22 as previously allowed for small buildings, and expecting further economy in large buildings.

On allowance of 30,000 cubic feet per class room:

	Cents.	Per cent.	Cost per Pupil at 40 to room.
Cost of building	16	80	
“ “ heating	2	12	
“ “ plumbing	1	5	
“ “ electric	1	3	
	<u>20</u>	<u>100</u>	<u>\$150</u>

Large buildings for lower elementary should come down to \$140 per pupil.

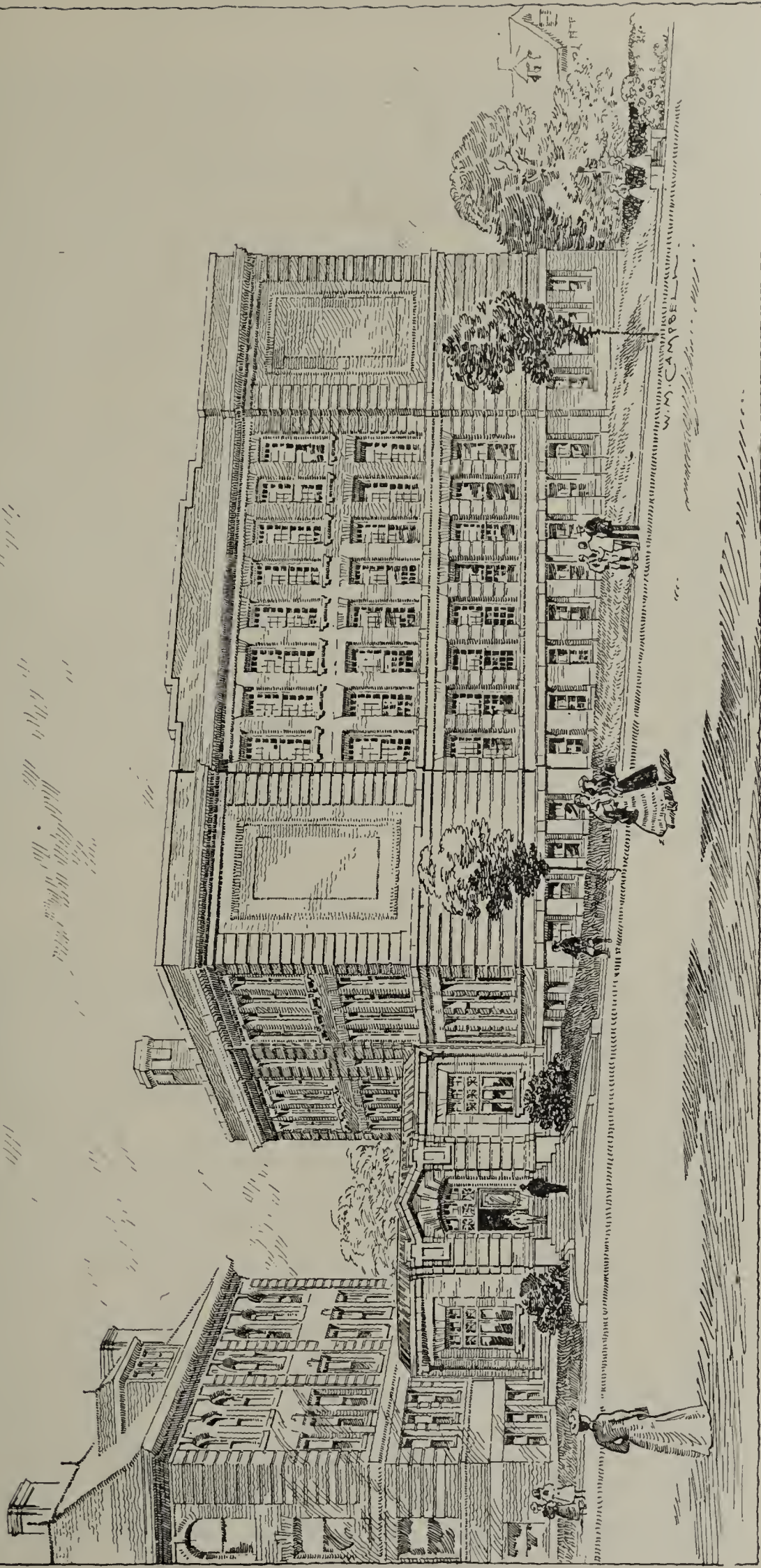
For assembly hall allow from two to four class rooms, according to size of school. This increases the cost without increasing the accommodation, so that the upper elementary cost per pupil might run from \$170 for small buildings to \$160 for large buildings.

One change in planning has probably proved economical. Galvanized iron, both in basement, the horizontal ducts, and in walls, the vertical ducts, has been largely eliminated. In place of this masonry ducts, below the basement floor and in the walls, have been substituted. This has not added materially to the cost of the masonry and has made a substantial saving in metal work. It seems, moreover, a more permanent and therefore better form of construction. This economy is one of the direct and immediate results of having our own heating engineer, who has concentrated his attention on economic planning.

In the Brimmer-Winthrop and in the Phillips district, the Board will have an opportunity of testing figures on a large upper grade and a fairly large lower grade school.

CITY OF BOSTON SCHOOLHOUSE DEPARTMENT
 DORCHESTER HIGH SCHOOL ANNEX
 LITHGOW STREET DORCHESTER

HARTWELL RICHARDSON & DRIVER ARCHITECTS BOSTON



DORCHESTER HIGH SCHOOL ANNEX, LITHGOW STREET.

HARTWELL, RICHARDSON & DRIVER, Architects.

For plans see page 79.

The former (as described page 75) has the Chicago type wardrobe referred to in the report of last year and the year before. This was planned for, both because the dimensions of the lot required the limit of compactness and because the Board was anxious to make the reduced appropriation (see page 9) go as far as possible towards completing this item. With a price for the land lower than we had anticipated and with the tailings of other items it is just possible that there may be enough to complete this school without any further appropriation.

The latter (as described page 73) is compact, has two plain walls on party lines and a comparatively small yard area to finish, and should therefore be an economical building.

The Board has been criticised by the Finance Commission for undue expenditure on school buildings, and the Commission has recommended that the present type of new school buildings be so modified that there may be a saving in cost, the reduction to be not less than 10 per cent. In the body of their report, the Finance Commission make it clear that their idea of modifying the type is to return to wooden construction of floor and partitions. In the judgment of this Board, true economy lies in good planning, in simple material, in avoidance of ornament and not in poor construction.

(3.) FUTURE ACCOMMODATION.

The changes made in the elementary schools two years ago, eliminating the ninth grade, showed itself to some extent last year in the increased number of high school pupils. In 1907-08 the increase in school population was confined to the high schools; there was practically no change in the numbers in the elementary schools. This year the full effect of the change is felt, and October showed an increase of 1,800 in the high schools as compared to a normal increase of 400-500. There was also an increase in the elementary schools of about 1,000. The whole of this, however, can be accounted for by the Chelsea fire. Returns from the masters show nearly this number of children from Chelsea.

Of the pressing needs for accommodation that were mentioned last year, the West End seems in a fair way to be met. The eighteen-room building on Joy street will be started by March, 1909. This should be followed shortly by the other West End school. As much of the comment the Finance Commission has made on the work of the Board has been rather unfavorable, it is pleasant to note one bright spot. They have

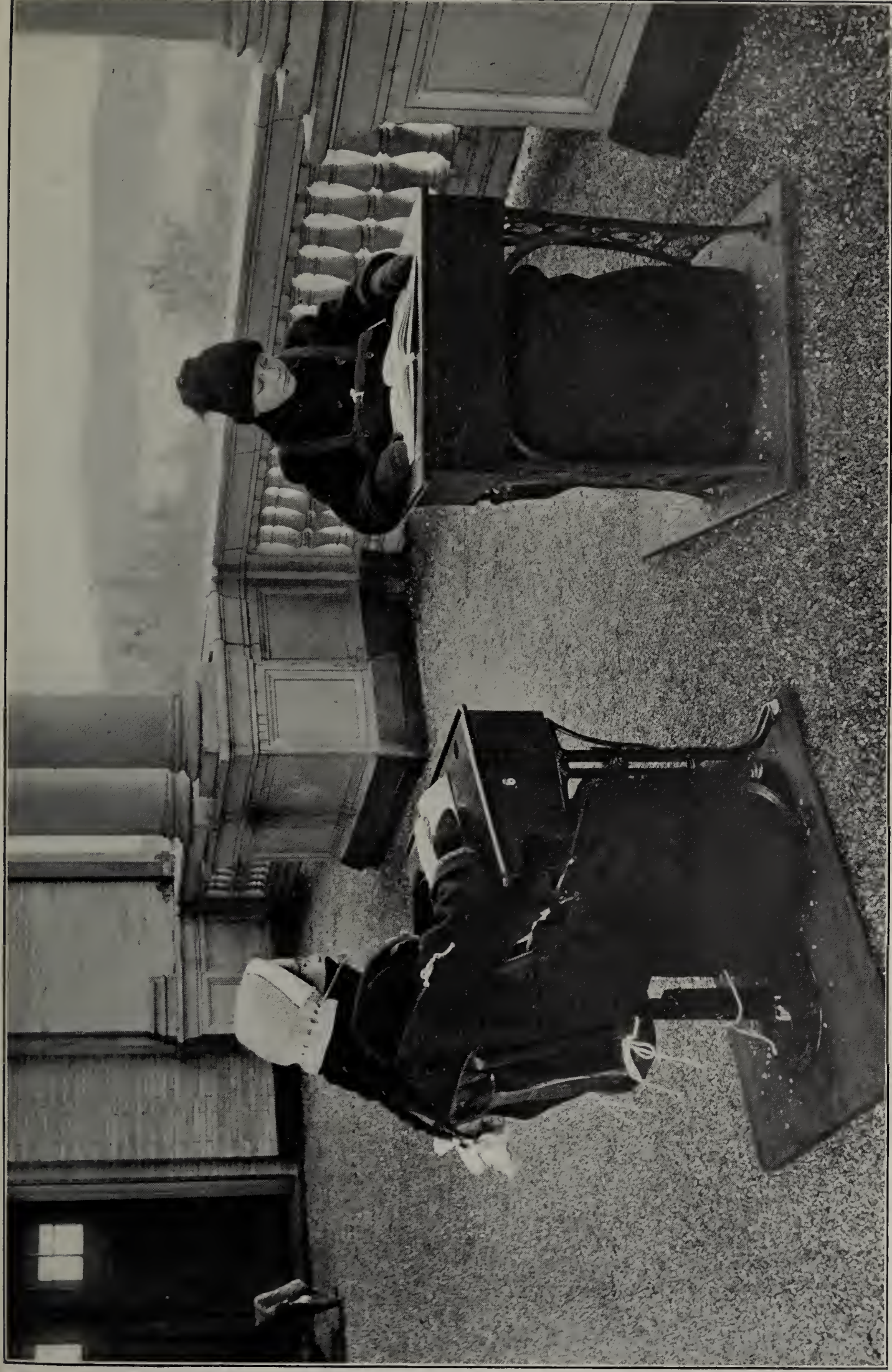
not only endorsed the embankment scheme, but, what is of far more importance, have urged (pages 374, 375) the establishment of country schools for the benefit of the children in the crowded tenement districts. Ever since this was first suggested by Mr. J. R. Coolidge, Jr., the Board has been unanimous in its support, and the masters in the North and West Ends and in the South Bay believe in it. If this ever comes, it will meet in the best possible way the overcrowding in old, poor buildings in these districts.

In the South End the same crowded condition exists that has been reported so often and the neighborhood of the Hyde and Sherwin will probably be the next district to be provided for. With the completion of the work in hand and the South End and South Bay cared for, the most pressing needs are those of the high schools. Practically all the existing buildings are full, only in South Boston and Charlestown is there any room at all, and the new schools (High School of Commerce and Girls' High School of Practical Arts) are growing rapidly, without appearing to draw from or relieve either local or central high schools. The completion of the Dorchester High Annex will care for that district for a time, an addition to the Roxbury High and to the Girls' High — for both of which land is bought — would help those schools. The fitting up of attic space in the West Roxbury High would help there; but the real need is the new building for the High School of Commerce and the moving of the Girls' High School of Practical Arts from its isolated position on Meeting House Hill to the Normal Group. This is an undertaking that will require much time and it should be started at once.

On January 20, 1909, the School Committee sent in to the Board the list for the coming year as follows:

	Pupils.
1. Adams district, elementary school, upper grades .	616
2. Sherwin district, elementary school, upper grades .	704
3. Lewis district, elementary school, lower grades .	440
4. Dwight district, High School (Girls' High School),	320

At about the same time they presented to the Legislature a bill asking for a special appropriation for a new High School of Commerce, and the Board presented a bill for permission to locate a school on the Embankment. With the items on this list cared for, and the passage of the two bills, substantial progress will have been made towards meeting the pressing needs in both elementary and secondary education.



OPEN AIR SCHOOL, REFECTORY BUILDING, FRANKLIN PARK, BOSTON.

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(4.) FIRE PROTECTION.

As reported last year (report 1907-08, page 19), the Board, at the request of the Mayor, submitted a list of buildings that required further fire protection to safeguard the children. These were under three heads: first, to prevent fires occurring, the protection of the heating plant, and its isolation from the rest of the building; second, to facilitate the rapid and orderly dismissal of the children in case of danger, a more perfect system of signals for fire drill; and third, emergency fire exits for buildings dependent on wooden staircases, especially for such buildings as are of three stories or more.

Under all these headings the Board had been systematically at work, but had been hampered by lack of means. With public interest aroused to the urgency of this work, it seemed desirable to take immediate steps to provide funds and have the work executed. The Board's report as to the needs was fairly accurate, but the estimate of cost was necessarily largely conjecture. The amount desired was \$200,000. The Board applied to the Legislature and under chapter 524 of the Acts of 1908, already quoted, under Item 6, page 7, was authorized to use such portion of previous appropriations for Land and Buildings as the Board estimated would remain unexpended after the required accommodation has been provided. The Board certified that in their opinion \$115,000 would remain unexpended. This was not equivalent to saying that the Board had overestimated the various items, but that with the consent of the School Committee one item was materially reduced in the accommodation furnished. This was not in strict accordance with the letter of the law, but both the School Committee and the Board felt that they were justified in the action and that if additional appropriation was needed to provide the full accommodation required by the vote of the School Committee, such additional appropriation would be provided.

As reported last year, the Board, feeling sure of public support in so vital a measure as one affecting the safety of the children, proceeded at once on this work and has made substantial progress under all three heads. In the list prepared for your Honor there were 118 schools in which the heating apparatus was to be protected; 170 schools to be equipped with fire drill signals, and 36 schools requiring additional means of exit. Under the first heading work has been done in about 15 schools; under the second in 76 schools; under

the third in 21 schools. The Board has contracted for \$84,510.32 of the \$115,000 set aside and is proceeding with the rest of the work. Under the first heading the work has consisted mainly of removing, protecting, or replacing inflammable material in or near the heating apparatus, reducing the number of openings to the space occupied by heating apparatus and fitting the remainder with fireproof doors. Under the second heading the work has been the installation of the fire drill signal system, reported on last year. In this the only change is that in some cases the box has been provided with a key, so that no unauthorized person can ring in an alarm for fire drill.

Under the third head, perhaps the least important of the three (as with protected heating apparatus a fire is unlikely to occur, and with perfect system of fire drill the children would be all out before danger forced them to use the fire escapes), thirteen schools have been equipped with fire escapes of a staircase type, with tread and rise about 9 inches by 8 inches, 2 foot 6 inch high rail, and guarded enclosure at the bottom with door at grade opening out.

Beside this work and before the bill had been suggested, asking for a special appropriation for the purpose, the Board had already made a careful inspection of all old buildings and had corrected all exits that were obviously unsafe, doors that opened in, or that were equipped with locks requiring key to open, or that were obstructed by winter porches. Nothing but constant and intelligent supervision will prevent such conditions as the Board then remedied. In many cases some minor change, made without due thought, was the cause of a dangerous condition. For example, an exit door, fitted with a spring lock, gives trouble because a pupil goes out, opens the catch up, leaving the school open, and a requisition for a "new lock" comes in, is granted, and the Board later finds the door equipped with a dead lock and no longer of any use as an emergency exit. Or, the Board finds that a storm door, built by some previous authority, fifteen or twenty years ago, opens in, or has a dead lock, or is so planned as seriously to impede exit. To avoid these mistakes requires constant care, to discover them requires still more.

All the above applies to the old buildings. It may be well to repeat here what standards the Board advises in new buildings. All doors from the building and all class room doors open out, wardrobe doors are double swung. The children's entrances are always to the basement and are independent of but convenient to the staircases up. The main entrance or entrances are also planned to be free of the

staircases. The staircases lead to the basement, so that the basement exits, as well as the main front door, or doors, are available in fire drill. In larger schools, or in schools with but one main door, emergency exits are also provided on the staircases which go out from a landing between the first floor and basement, at grade. No doors enclose or shut off the stairs. The buildings are all fireproof and the clearest approach to stairs is considered the best. The Board is now considering providing the class rooms with metal doors which if adopted would make the rooms a perfectly safe place to stay in if the corridors were filled with smoke. The heating apparatus is always isolated in the basement and has the fewest possible openings into the rest of the building. Self-closing, fireproof doors close these openings. There may be even in a strictly fireproof building some slight additional safety in locating the boilers outside the building. This, however, will add to the cost and, except where boilers under pressure are used for power, it is perhaps more theoretical than actual safety which is gained. The boilers were placed outside in the Blackinton School, and as far as cost is concerned, the Board can only say that this is one of the most economical of all the schools constructed in the last seven years, but certainly there would have been still more economy if the boilers had been located within.

A fire occurred in January, 1909, in one of the old, small primary schools that was evidently incendiary. It started when school was in session and began in oil-soaked clothing, which, in this old school, hung in the corridor. So abominable and hideous a crime as this, if undetected and unpunished, is a most awful danger to the community. The Board could take steps to remove inflammable material from corridors and stairs, but, unfortunately, where corridors and stairs are of wood, nothing short of rebuilding will accomplish this. Even the education of the community cannot prevent crimes like incendiarism, which spring generally from an unbalanced mind. Strict discipline in the schools and closer supervision over entrances should reduce such a danger to the minimum.

The work of carrying out the fire protection of old buildings has been done by the Board through its architectural and engineering divisions, and more could have been done, had it not been that all divisions were overcrowded with work and it was neither practicable nor wise to increase suddenly by a large influx of new draughtsmen the force in these divisions. The work, however, is going steadily forward towards completion.

III.

REPAIRS.

For the first time since 1906 the Board comes to the close of the fiscal year with no overdraft, and this is largely due to increased care in expenditures and more thorough supervision.

In the summer of 1907 it was discovered that recent building operations in and about the section of the city known as the South Bay had resulted in a general lowering of the water level and that buildings that were built forty or fifty years ago on piles, cut off in the neighborhood of grade 8 or 10, showed serious settlement. An examination showed that both the Quincy and Tyler Street Schools were in an unsafe condition. Both of these buildings had to be completely underpinned. Part of the work on the Quincy School was done in 1907, a charge against 1908 of over \$30,000. In the winter of 1907 the Board again suffered a serious loss, owing to a fire in the Walnut Street School. As in the case of the Lewis School fire, the loss occurred so near the end of the fiscal year that no foresight could prevent this being a charge against the account of 1908. These added burdens showed in the February, 1908, schedule of bills which was over \$48,000, and in large additional amounts in subsequent drafts for the next three months.

It was this serious condition of affairs which faced the Board on February 1, 1908, and made it essential that the most rigid economies should be exercised in every possible direction. During the year 1908-09 the Board has been fortunate in having no unusual expenses with the exception of completing the work on the Quincy School and the underpinning of the Tyler Street School, which cost between \$12,000 and \$14,000. Once more the Board received the relief which it had in 1902 in connection with the fire protection of buildings, which has enabled it to pay for such work out of the appropriation for Land and Buildings for Schools. The overdraft in February and subsequent months and the cost of the Quincy and Tyler Street foundations were known charges before the summer work was undertaken and the Board was able to plan its work accordingly.

Two items of repair have always been very large, furniture, and painting and tinting. In 1907-08 \$44,000 was spent on furniture, providing new, or providing adjustable irons, or repairing the old. Thirty-eight thousand dollars was spent in 1907-08 on exterior and interior painting and glazing. As a result of these expenditures both buildings and furniture were in fairly good condition, and the

Board decided that on these two items alone sufficient could be saved by neither redressing furniture nor tinting, for appearance only, to offset the deficiency with which the year started; \$8,000 was saved on furniture and \$20,000 on painting. Some years ago the Board established the policy of replacing worn out artificial slate boards with natural slate and each year since then has expended \$5,000 to \$10,000 on such work. In 1907 the Board spent \$4,800, and here also in 1908 a halt was called and another \$2,000 saved. These three savings offset the February overdraft and enabled the Board by the exercise of rigid economy to reach the end of the fiscal year with no overdraft against 1909. The February, 1909, schedule was \$9,015.30, which is the smallest amount since the Board has been established.

One valuable detail of routine has been tried with success this year, a monthly meeting of the heads of divisions and of the inspectors with the Board. At these meetings each inspector makes a report of all work done in his district during the month, and another report of what is required in the way of repair, major or minor, and of equipment. These reports are on printed forms. The Board passes on each item of required repair and if approved marks it immediate or for vacation work and it is so entered in a book, kept in duplicate, and always accessible to the inspectors and the Board. The result of these meetings has been of advantage in many ways. First, there has been no conflict of work between different divisions. If tinting, and wiring for telephones is to be done in the same building, they are done in proper sequence. Second, a uniformity as to what is desirable and what is necessary and what unnecessary has been established. Third, the Board has the advantage of the opinion of all its inspectors and its experts on any question that arises immediately available. Fourth, where individual inspectors differ as to the line between desirability and necessity, a committee of inspectors is appointed to select the necessary items.

The more complete organization of the departments of domestic and civil engineering has also helped in the economical planning, estimating and execution of all work that comes in their respective lines, and much petty electrical repair is done by one of the Board's regular force.

On the whole, the Board feels satisfied that substantial progress has been made in handling the repair fund so that the city shall get the best return for the money expended. A more detailed and comprehensive report of this important branch of the work is given in Report on Repairs in Detail, page 30.

IV.

POLICY OF THE BOARD.

The policy of the Board as to the employment of architects is being reconsidered and it is possible that in the near future the Board may undertake the execution of the new work themselves, just as now they take care of the domestic engineering. Since last year the American Institute of Architects has issued a new schedule of charges and six per cent, instead of five, is now the rate on all except domestic work. In view of the fact that this Board furnishes such a large amount of information to the architects employed by it, not only in general information but also in details of construction and equipment, and in view of the fact that the Board proposes to do some of this work itself and only a portion in any case will be given out, it does not seem desirable at this time to print any change in the "Architects' Services," which are given as usual in Appendix V.

The cost and the equipment of the elementary schools, notwithstanding the change in the size of class-rooms, has remained practically the same. In the high schools the Board is confronted with the new problems connected with educational work. The whole subject of technical education is so much in its infancy in this country that no one city from its own experience can lay down any general policy as to the desirable or necessary equipment for such work.

The Board believes that a somewhat needless amount of equipment is called for in the science laboratories and the policy of the Board will be to go forward slowly and tentatively in the equipment of rooms for technical work.

The engineering departments for heating and ventilating work are now firmly established and the force has been somewhat increased since last year and will require still further increase as the Board gradually takes complete control of the domestic engineering of all new buildings. The last of the buildings to be handled by outside engineers, the Mechanic Arts High School, is now complete.

This year the civil engineer has had added responsibility on his shoulders in exercising a general supervision over the department of architecture which has been temporarily without a head.

The Board is proposing in the near future to try to arrange for conferences between its engineers and those employed in similar work in other cities and believes that this will be of great mutual advantage. It is hoped that the Board may be able to reach definite conclusions in regard to the partial or

entire dependence upon fans for the heating and ventilation of the buildings and that series of tests may establish facts as to the actual operation of plants and enable the Board to compare what is planned for with the result.

Experiments with the various forms of artificial light that have been recently installed should enable the Board constantly to improve the facilities for evening work. New lamps are being put on the market constantly and the whole system of illumination is being studied in a scientific and thorough way which should give good results.

V.

GENERAL DEDUCTIONS.

These were covered in last year's report and no substantial change has been made. They are repeated briefly as a matter of record. All buildings are required to be fireproof up to and including the ceiling of the upper story. The cost is limited by allowing 30,000 cubic feet as a maximum per class-room and it is hoped that the price can be kept to 20 instead of 22 cents per cubic foot. For unusual expense in foundations an addition of 2 cents per cubic foot is allowed. In upper elementary schools an allowance of two class-rooms would be made for the assembly hall, or of four, if the building is of unusual size, say over sixteen rooms.

The Board has no information to add to what was contained in last year's report on the subject of high schools. It would seem as if \$400 per pupil ought to be sufficient allowance.

For the exterior, common red brick and stone. For the grounds outside the buildings, from 30 to 50 square feet per pupil. Elementary buildings having about them paved spaces, experimental gardens, planted spaces and simple enclosures, preferably hedges. The square foot test for the floor plans remains and is found effective. The class-room area on one floor multiplied by two should be the outside limit of the area of the floor. Buildings should be planned to give sunlight in every room at some time of the day. While the Board believes in unilateral lighting, it is better to have light from two sides than to have no sunlight. A room that has sunlight during all the school hours is not desirable.

The assembly hall should be placed as near the ground as possible. This is exemplified in the Bishop Cheverus and the Abraham Lincoln Schools.

The grade of the first floor should be sufficiently above the grade outside to make it possible to have doors to the basement with steps down inside. The basement floor, especially

in such rooms as are used for the work of cooking or manual training, should be kept as near the grade outside as is possible, to give reasonably high story, about 10 feet; with the boiler room having greater height and the floor at lower grade, the main ducts can be of masonry below the general basement floor.

The adjustable furniture, both desk and seat, is still in use, its success depending merely on the amount of attention that is given by the authorities to the adjustment.

VI.

FINANCIAL STATEMENT.

During the years that the Board has been in existence there have been each year a certain number of items completed, and in almost every case the Board has saved small amounts out of the appropriation. Although it is impossible to make a final accounting at this time, even of the first loans, \$7,500,000, it seems desirable, in view of the fact that there are now a considerable number of items on which balances are available, to make a brief summary to show approximately what funds are now available for work in addition to the actual items named in the appropriations for 1907-08 and 1908-09.

On the original list of forty-two items every account has been closed and the balances turned back to the general fund, with the exception of the following:

Mechanic Arts High School.

Normal and Latin School Group (building and furnishing).

Washington Allston district (Thomas Gardner School).

Dearborn district (new Dearborn School).

Of the loans made previous to 1907 the balance remaining in the general fund February 1, 1909, was \$10,453.77. On the Mechanic Arts High School the balance unexpended is approximately \$30,000. There remains on the Normal and Latin School Group \$3,157.84, land, building and furniture. On the Thomas Gardner School the balance unexpended is \$5,091.60. On the Dearborn School the balance unexpended is \$2,925.21.

Taking these in order, the balance on the Mechanic Arts High appropriation will, in the judgment of the Board, be insufficient to complete the equipment of this building. Probably \$15,000 more will be required.

On the Normal and Latin School Group the charge against the balance, \$3,157.84, is the payment for a strip of land,

the award of which has not been made, but it covers an area of 2,886 square feet, and at the price paid for the balance of the land will approximate \$4,400. There are also certain small items of furniture still unsettled. There will, therefore, be a deficit here of nearly \$1,500.

The Thomas Gardner. The unsettled claims of the contractor, if they are awarded in full by the court, will leave a balance of about \$1,500.

On the Dearborn, against the balance of \$2,925.21 there is no claim, except for a small strip of land containing about 40 square feet, which has not yet been settled. Nearly all this balance, certainly \$2,500, will be available.

The summary, therefore, of the appropriations previous to 1907 would show available in round figures not appropriated \$14,500, and against this a probable deficit of \$16,500 on the equipment of the Mechanic Arts High and the Normal land. This brings the Board to the appropriation of 1907 with a deficit of \$2,000.

Balance of General Fund	\$10,453 77
“ Thomas Gardner School	1,500 00
“ Dearborn School	2,500 00
	\$14,453 77

The list for 1907-08 was as follows:

	Pupils.
<i>Item 1.</i> —Agassiz district, elementary school, upper grades	264
<i>Item 2.</i> —Wells district, elementary school, lower grades	300
<i>Item 3.</i> —Bennett district, elementary school, lower grades	100
<i>Item 4.</i> —Adams district, elementary school, lower grades	200
<i>Item 5.</i> —Prince district, high school (Mechanic Arts High School)	800
<i>Item 6.</i> —Phillips district, elementary school, upper grades	880

Item 1.—*The Agassiz district.* The appropriation was \$62,000, to which the Board added for the purchase of land \$4,500, out of the previous tailings of the old appropriation available.

Against this amount there has been expended for the building and furniture \$57,556.10, leaving a balance of \$8,943.90. The land has not yet been paid for, nor has any work been done in grading it and making it available for school purposes.

The cost of the land and the grading is estimated at about \$5,000. This will leave an approximate balance of \$4,000 on this item.

Item 2.—The Wells district, addition to the Winchell School. Fifty thousand dollars was appropriated for this building, but, it proving insufficient, \$2,000 was added from the tailings, a total of \$52,000, and this amount was practically expended.

Item 3.—Bennett district, elementary school, an addition to the Hobart Street School. The appropriation was \$15,000. To this was added \$8,000, previously appropriated for the purchase of land, taken out of the old appropriation, a total, therefore, of \$23,000. The land, building and furniture, including the cost of grading, amounted to \$18,438.31, leaving an approximate balance of \$4,500.

Item 4.—The Adams district. The appropriation was \$15,000. To this was added \$3,000 from tailings, and under this item two operations were undertaken. First, building and furnishing four portable school buildings in the Plummer yard. Second, finishing and furnishing three additional rooms in the attic of the Plummer School. These two items cost \$17,537.72, leaving an approximate balance of \$450.

Item 5 is the *Mechanic Arts High School*, on which, as already reported, there will be a deficit if all the contemplated equipment is installed.

Item 6.—The Phillips district, elementary school, appropriation \$358,000. This item has been reduced by transferring \$115,000 to Fire Protection. As against the balance, \$243,000, the Board expects to spend for land about \$100,000, and for building and furniture about \$135,000, leaving a balance of about \$8,000.

This completes the statement of the appropriation for the year 1907, and shows a probable balance as follows:

<i>Item 1.—Agassiz district</i>	\$4,000 00
<i>Item 2.—Wells district</i>	200 00
<i>Item 3.—Bennett district</i>	4,500 00
<i>Item 4.—Adams district</i>	450 00
<i>Item 6.—Phillips district</i>	8,000 00
	\$17,150 00

The list for 1908-09 was as follows:

	Pupils.
<i>Item 1.—Edward Everett district, elementary school, upper grades</i>	616
<i>Item 2.—Brimmer district, elementary school, upper grades</i>	1,760

<i>Item 3.</i> — Eliot district, administrative office.	
<i>Item 4.</i> — Blackinton district, elementary school, upper grades	704
<i>Item 5.</i> — Dudley district, elementary school, lower grades	528
<i>Item 6.</i> — Henry L. Pierce district, high school (Dorchester High)	420
<i>Item 7.</i> — Longfellow district, elementary school, lower grades	352

Item 1.— *The Edward Everett district.* The appropriation was \$125,000. To this was added \$16,000 tailings for purchase of land, making a total of \$141,000 available. The building is now well along towards completion and it can safely be estimated that the building, incidentals and furniture will be finished for \$125,000. In addition to this there are 4,362 square feet of land which are yet to be paid for, presumably at the same price per square foot as the original purchase, \$1,750, which will leave a balance of about \$5,000.

Item 2.— *The Brimmer district.* The appropriation was \$450,000. On this item the work has not proceeded even to the final working drawings, and it seems unlikely, even with the lower prices that the Board hopes to get on the land, that there will be any balance on this appropriation, especially in view of the fact that \$10,000 was transferred as previously noted to the Dorchester High.

Item 3.— *The Eliot School,* administrative office. The appropriation was \$5,000, and the work cost \$4,486.01, a balance of about \$500.

Item 4. — *The Blackinton district,* elementary school, upper grades. The appropriation for the land was made out of the tailings of the original loans, \$34,000. The appropriation for this item in the 1908 list was \$140,000, a total of \$174,000 available. The land has been paid for. The building is under contract and is well forward towards completion. It is estimated that the final figures will not exceed, for land, building and furniture, \$154,000, leaving a balance of approximately \$20,000.

Item 5. — *Dudley district,* elementary school, lower grades. The appropriation for land and building was \$105,000. The land has been paid for. The building is all under contract and well forward and it is probable that the total cost of land, building and furniture will not exceed \$95,000, leaving a balance of about \$10,000.

Item 6.— *The Dorchester High School addition.* The appropriation, \$125,000, was increased to \$135,000 by transferring \$10,000 from Item 2. The land had been taken in 1905 and

an appropriation made to cover it at that time. It was not paid for until May, 1908, by execution of court. On this item \$17,500 was appropriated for the land, making a total appropriation on this item of \$152,500. The building has not yet advanced beyond the stage of working drawings. As it is a large building with considerable equipment in the basement, it is more than doubtful if there will be any balance on this appropriation.

Item 7.— The addition to the Longfellow School. The appropriation is \$50,000. The building is now about to be let and it is unlikely that there will be any substantial saving on this appropriation, which was considered a very small amount for an eight-room addition.

There is one other matter which affects the finances which might be added here. One hundred and fifteen thousand dollars has been set aside for Fire Protection and as against this the amount contracted for February 1, 1909, was about \$90,000. Other work of this nature still remains to be done and it is not likely that any balance will remain.

This completes the list for 1908, on which it will be seen that there is an approximate estimated balance as follows :

<i>Item 1.</i> — Edward Everett district, grammar school,	\$5,000 00
<i>Item 3.</i> — Master's office, Eliot district	500 00
<i>Item 4.</i> — Blackinton district, elementary school	20,000 00
<i>Item 5.</i> — Dudley district, elementary school	10,000 00
	<u>\$35,500 00</u>

SUMMARY.

Probable savings from loan, 1907-08	\$17,150 00
Probable savings from loan, 1908-09	35,500 00
	\$52,650 00
Probable deficit from loans previous to 1907	2,000 00
Probable balance	<u>\$50,650 00</u>

VII.

CONCLUSION.

In conclusion the Board wishes to express to your Honor its appreciation of your support of its work, more especially in enabling the Board to organize more thoroughly the departments of domestic engineering. Beyond the consideration of the problems connected with the sale of the School Committee's property on Mason street, and the possible utiliza-

tion of the Winthrop School property, no large problems have come before the Joint Committee of which your Honor is the chairman.

The Board wishes to express its sense of obligation to the Finance Commission, which has, with its various reports, aided the Board in its efforts towards economy.

The Board wishes also to thank the Superintendent and Assistant Superintendents for their constant support and co-operation, and more especially for the assistance of the two committees appointed by the Superintendent. One of these committees, with Mr. C. W. Parmenter as chairman, has advised with the Board in connection with the construction and equipment of high schools; the other committee, under the chairmanship of Mr. William C. Crawford, has advised with the Board on the construction and equipment of the elementary schools. This direct advice from the teaching force has been of great assistance to the Board and has enabled the Superintendent in giving his approval to plans to do so with the endorsement of his own committee of masters.

The thanks of the Board are also due to the architects who have worked for it and who, by their faithful services, have constantly added to the valuable material which is at the disposal of the Board for the proper execution of the new buildings. All this has made for efficiency in the work of the Board.

Respectfully submitted,

R. CLIPSTON STURGIS,
JAMES B. NOYES,
TILTON S. BELL.

REPORT ON REPAIRS IN DETAIL.

Because of resignations and changes made in the personnel of the Commission since the inauguration of your Honor, and also because of the rigid investigation made of the disposition of the repair funds under previous administrations, the Board feels that this phase of its work should be reported in considerable detail.

It is pleasant to report that, with a repair fund for the year 1908-09 of \$273,500, after setting aside the amounts for administration expenses, and with a great number of back bills to pay amounting to at least \$120,000, more important major items have been completed in masonry, electric equipment, furnishing adjustable irons, and heating than in any recent year, while all the large sanitation work, which up to 1907 was borne by the appropriation for Land and Buildings, was paid for out of the repair fund. In this connection it may be said that in 1907-08, the first year that this work was charged to the repair fund, the only sanitation work of any size undertaken was the work at the Phillips Brooks School, which cost but \$646.

THE SITUATION IN MARCH, 1908.

Since the burden of responsibility for repairs rested on the Commission as organized subsequent to March 17, 1908, this report will deal more intimately with the affairs of the department from that date. At that time a cursory examination of the books, coupled with reports of the clerk who had such matters in charge, all confirmed the impression that almost one-half of the \$273,000 had been used up by obligations either carried over from the last fiscal year or incurred by order between the first of the year and the middle of March. This left for the remaining ten and one-half months for maintenance, as well as major items, *only a little more than one-half of the repair fund*. The work was done, and on February 1, 1909, the outstanding bills amounted approximately to only \$4,915.14.

This was the abnormal condition in which the Commission found the repair account when the Commission was reorganized in March. Bills amounting to thousands and thousands of dollars were presented to the Commissioner then having the repairs in charge for approval, with no chance for appeal. A private business finding itself in such a condition would be in no position to secure any credit or any accommodation and might be forced into insolvency.

In other words, on January 1, 1908, the entire repair appropriation of 1907-08, amounting to \$330,300 was contracted for, making it necessary to draw on the appropriation for 1908-09 an amount that in March, 1908, approximated \$120,000 — a total liability of \$450,300.

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NEW TYPE OF PORTABLE BUILDING IN THE YARD OF CHOATE BURNHAM SCHOOL.

The office force reported that over fifty per cent. of this \$412,982.75 spent was given out without any competition. It can readily be imagined that when this system of giving work to favored contractors was immediately reversed, those who profited by the previous method inspired various forces to criticise the new method of conducting the work on a business basis.

In the efforts to correct what seemed to be abuses in the conduct of the repair account, the Commission has had the positive support of the members of the Finance Commission, and feels a sense of deep obligation to the members of the Commission.

Under the circumstances, fortified morally by the Finance Commission, and really compelled legally by existing laws to live within the appropriation, it was necessary to outline a policy which would cover only the most necessary work. This meant doing work which would protect existing property.

MONEY FOR REPAIR WORK.

A little over \$40,000 was reported to be available for so-called "summer repair work," even though there were insistent demands on file from the masters, and reports from the inspectors, involving a sum almost reaching \$300,000. From last year came the burden of responsibility for completing the building up of the foundations of the Quincy School as well as of the Tyler Street School. These items, involving approximately by estimate \$12,000 or \$14,000, were absolutely necessary. Second in importance came the items of replacing defective and dangerous boilers with new ones and the retubing of old boilers. For this it was necessary to set aside a sum not less than \$25,000. These two groups of items practically covered the whole amount to be set aside for summer work. To these it was necessary to add \$3,564, for insuring boilers for a term of three years, the former policy expiring in May, and for the first time \$1,137 was paid for the Johnson Automatic Service for the current year, this item having previously been paid in the succeeding year.

This meant cutting down and using most careful judgment in refusing many kinds of requests for equipment, etc., which are sent in by the masters from day to day through the inspectors. The work was completed at both the Quincy and Tyler Street Schools, with only very slight inconvenience and delay in opening these schools at the beginning of the regular school term. The reports of the insurance company having such matters in charge, with regard to defective boilers, etc., were not received by the department until well along in the summer. Plans then had to be drawn and contracts let after proper advertising. This meant in some cases a delay, which was unfortunate. By securing competitive figures on groups of work of a similar nature, always from responsible people,

enough savings were made so that certain plumbing items and masonry items, all making for safety and health, might be undertaken and completed within the appropriation.

SAVINGS BY CONTRACT.

A comparison of contracts awarded during the year 1908-09 and those awarded during 1907-08 shows the following figures:

	1907-08.	1908-09.
Masonry	\$11,788 25	\$21,342 99
New boilers	2,950 00	12,898 75
Other heating work	7,370 00	12,299 82
Roofing	430 64	8,521 87
Electric work	6,756 19	9,010 93
Plumbing	1,702 66	8,489 45

In addition to this during 1908-09 contracts for various other kinds of work were awarded as follows:

Carpentry	\$11,125 71	
Building portables	6,365 27	
Painting and tinting	5,072 00	
Miscellaneous work	3,467 92	
Moving portables	4,609 00	
		<u>\$30,639 90</u>

Since the Commission has been organized as at present, it has been deemed advisable to do only the smallest amount of tinting and whitening and to incur only the least expense for the so-called repolishing and refinishing of furniture. Although this last item appears on the draft of 1908-09 as amounting to \$36,529.60, of which a very small part was expended for new furniture, almost this entire sum was incurred before March, 1908. It was in this particular item, as proved by the rigid examination of the Finance Commission, that more than a considerable portion of the charges of loose and unprofitable expenditures was verified.

It is interesting to note the value of contract work as against dividing one kind of work among various mechanics in various districts. *For example*, in the matter of catch-basins the records show that in 1907 catch-basins in 49 school yards were cleaned and repaired for the sum of \$1,484.71. In 1908 by contract 338 catch-basins were cleaned for \$728. In the past the matter of replacing sash cords in windows in the schools has been a considerable item. This year nearly all the districts have been covered by contract. In 1907 the price of putting in a sash cord averaged at least \$1. In many districts this same work is being done by contract for 55 cents a cord.

It seems absolutely just to the department and the City of Boston to record here certain units of prices for work now done

by responsible contractors, as compared with similar work given out without competition in the past:

	1907-08.	1908-09.
Cleaning and repairing catch-basins,	\$10.91 each.	\$2.15 each.
Replacing window cords . . .	\$1. (Average.)	\$0.49. (Average.)
Painting kindergarten lines . . .	\$13. (Average.)	\$7. (Contract.)
Putting on storm windows . . .	\$858.05	\$352.25
Setting glass (ordinary size) . . .	\$1 to \$3	\$0.75 to \$0.90
Housing topmasts . . .	\$160.25. (Last done in 1906.)	\$100
Building portables . . .	\$2,197.25 each.	\$1,229.61 each.

It must be borne in mind that, because of the occasional changing of inspectors' districts, the co-operation of department heads and the scrutiny given by more than one commissioner to all items of work of any importance, the responsibility for authorization, as well as the cost of a job, must be shared by various persons.

Cleaning furnaces in schools and portable buildings was done last summer by contract. The heating department reports that this work was never done so well and comparative figures of cost follow:

REPAIRING FURNACES.

	1907-08.	1908-09.
Portable buildings and schoolhouses . . .	\$2,536 59	
Portable buildings		\$367 00
Schoolhouses		1,925 15
		<u>\$2,292 15</u>

EFFECT OF PUBLICITY AND OPEN BIDDING.

Publicity of the work of the department and a real effort to convince contractors of all kinds that specifications have been written with the idea of their being adhered to, have resulted in a more general bidding on every kind of work. The contract has been signed for certain furniture constantly used in the schools, and the comparison of prices paid in 1907 with the contract prices of 1908 follows:

	1907-08.	1908-09.
Teacher's swivel chairs	\$6 25	\$5 25
Visitor's chairs	1 75	1 62½
Rocking chairs	4 35	2 25
Willow chairs	3 95	4 25
Teachers' room chairs	1 75	1 65
Kindergarten chairs	75	65
Rubber tips	60*	1 00*
Willow couches	15 00	13 00
Mattresses	8 00	5 00
Tablet arm-chairs	5 33	4 00
Teacher's tables	8 00	7 50

* Per dozen.

Special attention is being paid to the matter of equipment for nurses. Cabinets, tables, etc., were placed in the following schools during the year 1908-09:

Hyde.	Martin.
Franklin.	Bunker Hill.
Harvard.	William E. Russell.
Dwight.	Adams.
Lawrence.	Lincoln.
Quincy.	Everett.

In the latter part of the year the commissioner in charge of this work visited, with the supervising nurse, many of the schools with a view to improving the quarters set aside for the nurses, building rooms, where such were necessary, and placing additional equipment wherever it was needed. Although this work will be charged to the appropriation for 1909-10, it being undertaken at so late a period of 1908-09 that the new appropriation will become available before the bills for this work are received, it seems well to speak of it, as it was ordered, and the greater part of it well under way, before February 1, 1909.

SAVING IN PORTABLE BUILDINGS.

Portables built by School Committee, average price	\$1,409 00
Portables built by Schoolhouse Commission, prior to 1907, average price	1,785 00
Portables built by Schoolhouse Commission in 1907, average price	2,197 25
Portables built by present Schoolhouse Commission in 1908, average price	1,229 61

In regard to portable buildings: A problem that has constantly confronted the department has been the matter of making a portable school building, that is, a building to house one class, a building which might be quickly put up and as quickly taken down and moved to another section of the city when required. As reported on March 25, 1902, by the late Mr. Cass of this department, the average price of the twelve portable buildings built by the School Committee, including heating, ventilation and painting, where there was painting, was \$1,409. The average price of forty-eight buildings built by the Schoolhouse Commissioners was \$1,785 each. In 1907-08 four portable buildings were built by the Board, the contract price, including heating, being \$8,789.

Although these buildings were intended to be *portable*, the bids submitted from a group of builders and movers, from whom bids were asked, ranged from about \$400 to over \$800 each. In other words, in some cases it cost half the price of the building to take it down and move it from one section of the city to another. Knowing the need of portable buildings for added accommodation, especially in the Phillips district in the West End, with the repair fund reduced to a minimum, most careful



INTERIOR OF PORTABLE BUILDING IN THE YARD OF CHOATE BURNHAM SCHOOL.

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URBANA



OLD TYPE OF PORTABLE BUILDING IN YARD OF CHARLES C. PERKINS SCHOOL.

economy had to be used for this necessary item. The department secured from a portable house construction company four portable school buildings, delivered in Boston, for the sum of \$2,320. These were set up on the lot taken for the new school in the Phillips district, on South Russell street, and cost, including all additional items, heating, etc., \$1,229.61 each. The firm of contractors that set up the buildings in Boston has made a preliminary estimate that any one of the buildings may be taken down and set up in another section of the city for approximately \$250.

The department feels warranted in stating to your Honor that every problem of repair work has been given most careful consideration. The Commissioner having these particular matters in charge has had not only advice and assistance from the departmental heads, but the opinion and testimony of experts outside, and of contractors who are in a position to secure the most skilled and accurate judgment. A most careful examination of the work done and a most thorough, almost searching investigation by testimony and through the heads of departments, as well as inspectors, would seem to confirm a statement publicly made that the department is getting a dollar's worth of work and material for every dollar expended.

THE SYSTEM ON REPAIR WORK.

In regard to repairs, the system followed may be thus summed up.

Briefly, a master makes a written request for repairs, the inspector covering that district examines it, a commissioner approves or disapproves, and, if approved, the inspector makes an estimate. If the estimate exceeds \$25, competitive figures are requested from mechanics or contractors of good standing. The names of such contractors or artisans are given by the Commissioner and such Commissioner opens and awards the bids, almost invariably to the lowest bidder. On January 1, 1909, the experiment was tried of authorizing the masters to undertake petty repairs, such as carpentry, not to exceed one day's labor, setting glass, putting in window cords and repairing locks.

The Commissioner having in charge the matter of repairs feels that much credit should be given to the Chairman of the Board for his important idea, applied early in the year 1908, of calling together once a month the heads of departments and inspectors. These meetings not only provide an opportunity for the reports of the needs in the various districts, but also insure a co-operation by the various departments, which means the completion of various kinds of work systematically and economically. The department is to be congratulated upon the value of the heads of the various divisions, the heating division in charge of Mr. Eveleth, the electrical division in

charge of Mr. Hatch, and the civil engineering division in charge of Mr. Austin, who has also temporary charge of the draughting department.

Since the organization of the present Commission, one Commissioner has personally inspected every estimate and every bill for such work before approving the bill. Whether a coincidence or not, the estimates now vary little from the final bill, whereas in the past, under what appears to have been a perfunctory signing of bills, the final bills exceeded the estimates anywhere from 10 to 100 per cent.

It has been the definite aim of this Commission, as at present organized, to treat the matter of repairs as trustees of private property should treat such matters. It has been the constant aim of the department thus organized to make repairs and not votes. A man's politics, whatever they may be, do not prevent him from commissions, provided his work is satisfactory. All inspectors are directed rigidly to insist upon work being done according to specifications.

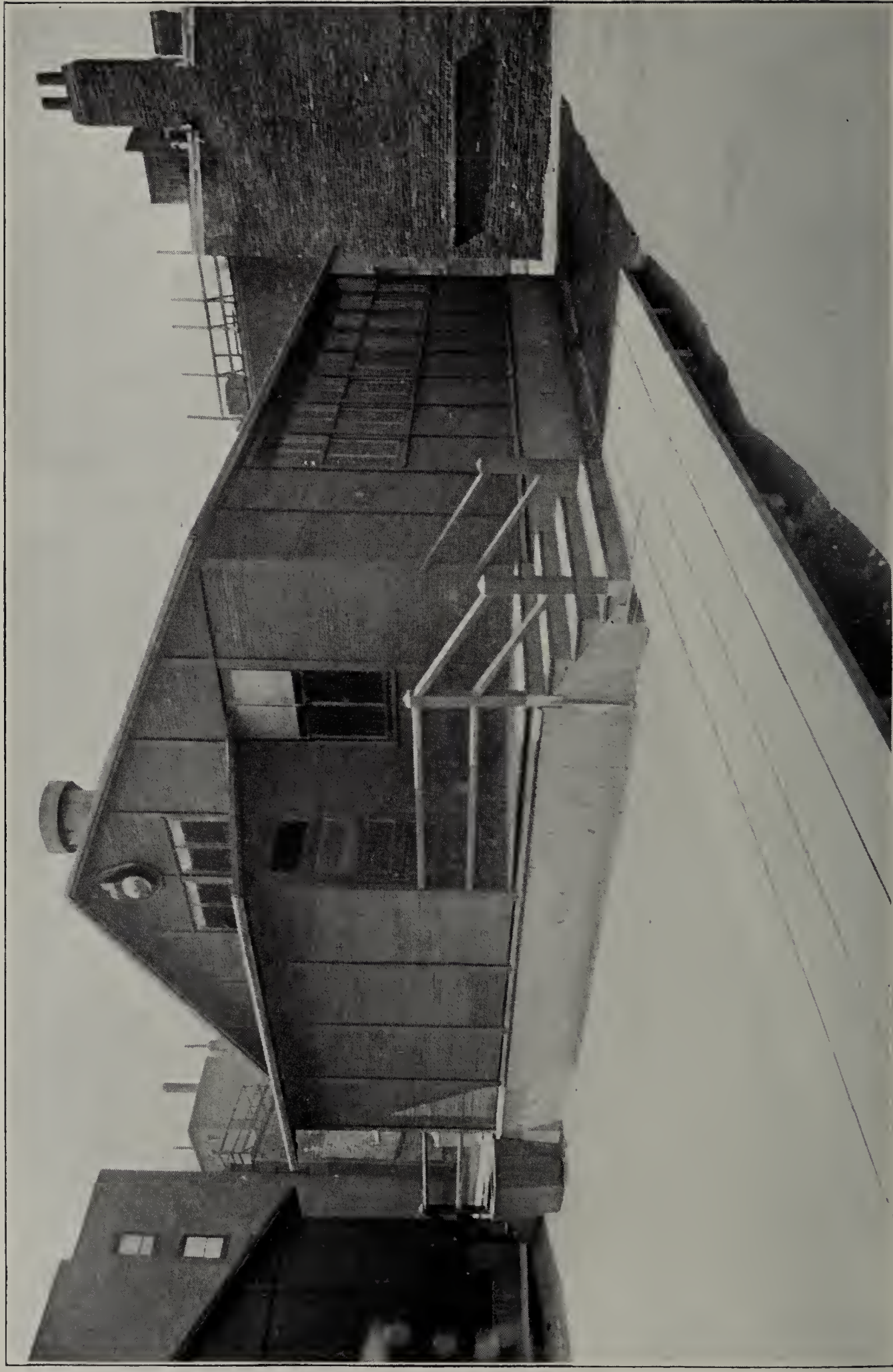
THE POLICY FOR 1909-10.

For the year 1909-10 I beg to report to your Honor that a definite policy for the disposition of the repair fund budget—*almost intact*—has been outlined. This means that a large number of matters of major importance will be well in hand, plans drawn, specifications made, contracts let, and all preparations made to begin the work immediately upon the closing of the schools in June.

No business, public or private, may be conducted without a considerable confidence; no Commissioner and no body of Commissioners could see every identical item of repair requested by the master and approved by the inspector. An amiable construction of a specification, or an unwarranted approval of a bill for work performed, by an inspector cannot always be detected. Specifications drawn with the intention of preventing some contractor from making a low figure, because others invited to bid will bid on specifications less strict and expensive, may not always be prevented by any rigid inspection on the part of the Commissioners in charge. This brings to mind certain changes in the force of inspectors which occurred early in the year. So far as the disposition of the money of the city is concerned, it matters little whether the approval of a bill far in excess of that which should have been submitted, was done maliciously, carelessly, or amiably. The result is the same to the city's purse. It matters little whether work which is not necessary to be done is ordered through friendliness to a contractor or a master, a commissioner, or even the appointing power, the result to the city's purse is the same.

JAMES B. NOYES,
Commissioner.

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA



NEW TYPE OF PORTABLE BUILDING IN LOT, JOY AND SOUTH RUSSELL STREETS.

DISPOSITION OF THE REPAIR FUND IN DETAIL.

Below is appended a comparison of all items of repairs, administration expenses, etc., of the fiscal years 1907-08 and 1908-09.

Repairs:

	1907-08.	1908-09.
Carpentry, lumber and hardware,	\$48,696 13	\$54,058 30
Furniture, new, and repairing old,	44,306 14	36,529 60
Heating apparatus	33,327 93	40,731 56
Roofing and metal work	17,280 00	17,928 76
Painting and glazing	20,084 80	16,760 33
Mason work, paving and drains	13,081 65	42,745 04
Plumbing repairs	13,105 78	12,036 30
Electric fixtures and wiring	10,025 51	6,499 73
Electric bells and telephone systems	2,593 95	5,971 72
Grading yards	5,985 48	2,372 65
Slate blackboards	4,831 37	2,820 37
Gas fixtures and installing	3,181 89	3,023 97
Ventilation (galvanized iron work)	6,748 36	3,247 49
Iron and wire work	4,783 35	4,433 52
Whitening and tinting	17,885 69	1,149 20
Automobile expenses	4,434 55	2,908 97
Care and cleaning	1,701 99	1,646 38
Janitors' supplies	260 15	507 75
Locksmithing	1,851 58	1,902 77
Planting and care of lawns	1,660 90	708 23
Blackboards, repairs of	4,153 13	1,784 99
Teaming	1,340 79	1,265 57
Flagstaffs and repairs	781 54	1,743 54
Motors and engines	776 46	1,634 83
Gymnasium apparatus	345 93	430 67
Rubber treads and matting	230 94	126 81
Advertising, plans, etc.	42 23	258 17
Fire hose and extinguisher charges	128 50	801 90
Removing snow from roofs	2,311 80	
Fuel	19 20	
Asphalt	569 00	1,226 90
Shoring buildings	1,241 25	1,081 47
Fire protection		5,211 97
Insurance on boilers		3,577 32
Concreting		591 04
Exterminating moths		552 63
Fire escapes		407 01
Fire alarm		321 54
Cleaning vaults		29 10
Total repairs	<u>\$267,767 97</u>	<u>\$279,028 10</u>

Amounts Taken from Repairs:

Electric clock systems	\$2,212 88	\$1,749 27
Auxiliary fire alarm, rent and repairs	4,687 50	2,078 18
Car tickets and travelling expenses	853 50	1,109 62
Printing and postage	2,449 84	1,705 21
Salaries of inspectors	13,892 46	14,699 21
Horse keeping	1,118 60	1,325 38
Total amounts set aside	<u>\$25,214 78</u>	<u>\$22,666 87</u>

Administration Expenses:

Salaries of commissioners and clerks	\$13,811 59	\$12,508 83
Rent of office	2,100 00	2,100 00
Care of office and electric light	1,106 80	1,076 50
Telephone and messenger service, ...	725 02	764 50
Stationery	337 49	804 22
Repairs and furniture	1,562 82	70 48
Subscription, Dun's agency		105 00
Ice		21 60
Total	<u>\$19,643 72</u>	<u>\$17,451 13</u>

Hired Buildings and Taxes:

Rent roll	\$16,940 00	\$14,298 90
Water rates and taxes	733 53	55 00
Total rents and taxes	<u>\$17,673 53</u>	<u>\$14,353 90</u>
Total of appropriation	<u>\$330,300 00</u>	<u>\$333,500 00</u>

The repair work in the year 1907-08 was given out to a very large extent by order and not on competitive bids.

Contracts for major masonry items for the year 1908-09 include the following:

SCHOOLS.	1908-09.	Contracts.
Various schools.....	Cleaning catch-basins.....	\$728 00
Edward Everett.....	Building wall and pointing.....	149 00
Elbridge Smith.....	Brick work.....	392 40
Hull.....	Pointing.....	180 00
Minot.....	Pointing.....	489 50
Mary Hemenway.....	Grading.....	1,292 00
Paul Revere.....	Paving.....	292 40
Phillips Brooks.....	Pointing.....	350 00
Phillips Brooks.....	Paving.....	311 00

SCHOOLS.	1908-09.	Contracts.
Washington.....	Waterproofing.....	\$518 00
Andrews.....	Masonry, etc.....	672 00
Phillips Brooks.....	Building catch-basins.....	120 00
O. W. Holmes.....	Grading.....	549 00
Bigelow.....	Masonry.....	1,163 00
Samuel W. Mason.....	Masonry.....	750 00
Roxbury High.....	Pointing.....	159 00
Robert G. Shaw.....	Concrete work.....	187 50
Winship.....	Resurfacing coal pocket.....	197 10
Mary Hemenway.....	Resurfacing corner of building.....	149 97
Normal.....	Resetting edgestone, paving gutter, etc.....	145 26
Lewis.....	Waterproofing cold air duct.....	174 00
Quincy.....	Foundations.....	7,488 86
Tyler Street.....	Foundations.....	4,093 00
Drake.....	Two new chimneys.....	552 00
Normal.....	Repairing boiler setting.....	240 00

In 1907-08 contracts for the following items of masonry were awarded:

SCHOOLS.	1907-08.	Contracts
English High.....	Paving.....	\$250 00
Mather.....	Grading.....	2,660 00
Quincy.....	Foundations.....	2,500 00
Mechanic Arts High.....	Repairing boiler setting.....	335 00
Jefferson.....	Paving.....	700 00
Ellis Mendell.....	Masonry.....	175 00
Quincy.....	Shoring walls.....	503 25
Paul Jones.....	Paving and catch-basin.....	320 00
South Boston High.....	Grading.....	1,700 00
Paul Jones.....	Pointing.....	1,200 00
Mary Hemenway.....	Building wall.....	1,065 00
Paul Jones.....	Oiling exterior walls.....	380 00

In the matter of heating during 1908-09 new boilers were installed and set, and tubes put in old boilers, by contract in the following schools:

SCHOOLS.	1908-09.	Contracts.
Wells.....	Two new boilers.....	\$998 00
Appleton Street.....	New boiler.....	450 00
Old Mather.....	Two new boilers.....	890 00
John A. Andrew.....	Two new boilers.....	1,313 75
Dorchester Avenue.....	New boiler and piping.....	597 00
Appleton Street.....	Setting up and piping boiler.....	995 00
Wells.....	Setting up and piping boilers.....	2,280 00
John A. Andrew.....	Setting up and piping boilers.....	2,585 00
Old Mather.....	Setting up and piping boilers.....	1,875 00
Dorchester High.....	New tubes in boiler.....	330 00
Various schools.....	Retubing boilers.....	585 00

In 1907-08 the following new boilers were installed by contract:

SCHOOLS.	1907-08.	Contracts.
Girls' High.....	New boilers.....	\$1,220 00
Girls' High.....	Setting new boilers.....	1,270 00
North Harvard Street.....	New boiler.....	460 00

A comparison of contracts awarded for other work on heating apparatus during the years 1908-09 and 1907-08 shows the following:

SCHOOLS.	1908-09.	Contracts.
Frothingham.....	Additional radiation.....	\$135 00
Mt. Vernon.....	Additional radiation.....	107 00
Myles Standish.....	Additional radiation.....	288 00
Robert G. Shaw.....	Additional radiation.....	202 00
Cyrus Alger.....	Additional radiation.....	374 00

SCHOOLS.	1908-09.	Contracts.
Girls' High.....	Changes in apparatus.....	\$317 00
Various schools.. ..	Fusible plugs in boilers.....	1,080 00
Various schools.....	Repairing steam apparatus.....	5,257 00
Fresh Air School.....	Changes in apparatus.....	108 00
Bowdoin.....	Changes in apparatus.....	657 00
Bowdoin.....	New engine.....	573 00
Quincy.....	Additional radiation.....	285 00
Various schools.....	Safety valves.....	352 17
Portables.....	Repairing furnaces.....	367 00
Various schools.....	Repairing furnaces.....	1,925 15
141 Savin Hill avenue.....	New furnace.....	160 00
Various schools.....	Fusible plugs.....	112 50
1907-08.		
Mather.....	Steam piping.....	230 00
Mary Hemenway.....	Changing apparatus.....	305 00
Comins.....	Repairing radiators.....	169 00
Various schools.....	Repairing boilers.....	563 00
Various schools.....	Repairing apparatus.....	5,998 00
W. L. P. Boardman... ..	Additional radiation, etc.....	105 00

In the matter of roofing and roofing repairs the department completed three new roofs and arranged with competent roofers to make repairs on schools by contract as follows:

SCHOOLS.	1908-09.	Contracts.
Lincoln.....	New roof.....	\$1,275 00
Appleton Street.....	New roof.....	1,175 00
Rice.....	New roof.....	1,794 00
Phillips.....	Repairs.....	1,074 67
Brimmer.....		
Baldwin.....		
Franklin.....		
Washington Allston.....		
Everett.....		
Cushman.....	Repairs.....	811 00
Somerset Street.....		

SCHOOLS.	1908-09.	Contracts.
Hancock.....	Repairs.....	\$372 20
Pormort.....		
Sharp.....		
Wells.....		
Eliot.....		
Norcross.....	Repairs.....	438 00
Lawrence.....		
Kenilworth Street.....		
Adams		
Harvard.....		
Edward Everett.....	Repairs.....	539 00
Hyde.....		
Prescott.....		
Tileston.....		
Shurtleff.....		
Mason street building.....	New roofs.....	360 00
Six portables.....		
Six portables.....		
Bowditch.....		
	1907-08.	
Bailey street	Repairing roof.....	430 64

Contracts for electric light, telephones, etc., were awarded as follows:

SCHOOLS.	1908-09.	Contracts.
George Street.....	Bells.....	\$343 00
Robert G. Shaw.....	Electric light.....	418 00
Various.....	Program bells.....	679 48
Bowditch.....	Telephones and clocks.....	992 00
East Boston Drawing.....	Lighting.....	188 00
Frothingham.....	Telephones.....	420 00
Franklin.....	Bells and telephones.....	648 00
Harvard.....	Telephones.....	401 00
Winchell.....	Fixtures.....	273 00
Bennett and Standish.....	Yard gongs.....	104 90

SCHOOLS.	1908-09.	Contracts.
Girls' High School Practical Arts.....	Reflectoscope.....	\$271 00
Girls' High.....	Light and telephones.....	1,628 00
Fresh Air School.....	Electric light.....	382 55
Agassiz.....	Electric light.....	649 00
Mary Hemenway.....	Telephones.....	598 00
Phillips.....	Electric light.....	1,015 00
1907-08.		
Sherwin.....	Mercury rectifier.....	363 75
Comins.....	Electric light.....	1,993 89
Wells.....	Electric light.....	1,287 00
Phillips.....	Electric light.....	240 00
Washington portables.....	Electric light.....	110 00
Quincy.....	Electric light.....	215 00
Mary Hemenway.....	Electric motors.....	515 55
English High and Latin....	Telephones and regulator.....	1,781 00
Winchell.....	Fixtures.....	250 00

A comparison of contracts awarded for plumbing work during the years 1908-09 and 1907-08 follows:

SCHOOLS.	1908-09.	Contracts.
Mary Hemenway.....	Hot-water boiler.....	\$193 60
Phillips Brooks.....	Work in cooking room.....	118 85
William E. Russell.....	Hot-water tank.....	329 00
Girls' High School Practical Arts.....	Plumbing.....	295 00
Horace Mann.....	New water supply.....	846 00
Baldwin.....	New sanitation.....	2,090 00
North Harvard Street.....	New sanitation.....	4,152 00
141 Savin Hill Avenue.....	Plumbing.....	139 00
Bowditch.....	Hot-water boiler.....	121 00
Dwight.....	Slate sinks.....	205 00
1907-08.		
Phillips Brooks.....	Urinal.....	635 00
103 Chambers Street.....	Plumbing.....	313 66
Lewis.....	Work in cooking room.....	329 00
All Saints' Hall.....	Plumbing and carpentry.....	425 00

The following is a list of miscellaneous items of work for which contracts have been awarded during the year 1908-09:

SCHOOLS.	1908-09.	Contracts.
Warrenton Street.....	Carpentry.....	\$185 00
Bowditch.....	Carpentry.....	367 00
Girls' High School Practical Arts.....	Carpentry.....	270 00
Auburn.....	Painting.....	196 00
Brimmer.....	Painting.....	196 00
Brighton High.....	Altering room.....	210 00
Charles Sumner.....	New floor.....	190 00
Copley.....	Window guards.....	190 00
English High.....	Painting after fire.....	522 00
	Carpentry after fire.....	275 00
Elbridge Smith.....	Carpentry.....	115 00
Various schools.....	Repairing and painting flagpoles.....	897 00
Hugh O'Brien.....	Window guards.....	189 00
Hugh O'Brien.....	Painting.....	197 00
Heath Street.....	Painting.....	105 00
Ira Allen.....	Painting.....	140 00
Jefferson.....	Painting.....	110 00
Lincoln.....	Painting.....	195 00
Jefferson.....	Painting.....	125 00
Old Mather.....	Plastering ceiling of boiler room.....	109 00
Moving Portables 14 and 27.....		930 00
Moving Portables 3, 47 and 90.....		1,640 00
Moving Portable 4.....		390 00
Paul Revere.....	Painting.....	130 00
Various schools.....	Housing topmasts.....	100 00
Various schools.....	Stairtreads.....	152 40
Washington.....	Apparatus case.....	117 50
W. L. P. Boardman.....	Painting.....	181 00
Girls' High School Practical Arts.....	Carpentry, kitchen.....	1,403 00
Shurtleff.....	New exit.....	390 00
Moving two portables.....		650 00
Howard Avenue Annex.....	Carpentry.....	310 00
Andrews.....	Strengthening floors.....	672 00
Copley.....	Painting.....	275 00

SCHOOLS.	1908-09.	Contracts.
Various schools.....	Cleaning carpets.....	\$357 65
Winship.....	Painting.....	266 00
Washington Street (Forest Hills).....	New steps.....	134 00
William W. Warren.....	Repairing fence.....	274 00
William H. Kent.....	Painting.....	338 00
Winthrop.....	Painting and tinting ten rooms.....	210 00
Washington Allston.....	Tinting.....	285 00
Washington Allston.....	New floors.....	736 00
Girls' High.....	Alterations.....	1,043 00
Christopher Gibson.....	Building fences.....	1,073 00
Brighton High.....	Laboratory generator changes.....	337 00
Roxbury High.....	Wardrobes.....	740 00
Roxbury High.....	Passageway.....	400 00
Hyde.....	New floors.....	629 50
Franklin.....	New floors.....	794 00
Portable 89.....	New floor.....	107 75
Plummer.....	New skylight.....	100 00
Fresh Air School.....	Alterations.....	175 00
Brighton High.....	Arm-chairs.....	132 00
Dwight.....	Building nurse's and store room.....	225 00
Everett.....	Building teachers' and store room.....	235 00
Franklin.....	Building nurse's and two store rooms.....	364 00
Moving portable to Phillips street.....	.....	450 00
Practical Arts High.....	Standards for laboratory.....	155 40
Longfellow.....	Moving portable.....	549 00
Four portables, Joy street,	Building and completing.....	4,918 44
One portable, Choate Burnham yard.....	Completing.....	1,446 83
William E. Russell.....	Painting.....	207 00
Various.....	Reseating chairs.....	503 75
Various.....	Brass strips on water-closet seats.....	144 62
Brewster and Annex.....	Painting.....	145 00
Bartlett Street.....	Painting.....	112 00
Charles C. Perkins.....	Refinishing furniture.....	120 00
East Boston Evening Drawing.....	Benches.....	240 00
Various.....	Putting on storm windows.....	328 06
Lewis.....	Painting.....	125 00
Roxbury High.....	Reputtying sash.....	115 00

The following table shows the schools and the equipment for nurses ordered, together with the estimates:

SCHOOLS.	1908-09.	Estimates.
All Saints' Hall.....	Equipment.....	\$20 00
Blackinton.....	Equipment.....	37 00
Bowdoin.....	Awaiting report.....	
Bunker ¹ Hill.....	Heating, tinting, gas light, equipment.....	298 00
Chapman.....	Cabinets.....	13 00
Charles Sumner.....	Changing toilet, tinting, painting, repairing floor, etc.....	95 00
Comins.....	Lavatory, plumbing, heater, and equipment,	188 00
Dillaway.....	Tinting, changing furniture, equipment....	100 00
Dudley.....	Lavatory, tinting, equipment, etc.....	233 00
Dwight.....	Building room, lavatory, equipment	183 00
Franklin.....	Building room, lavatory, equipment	175 00
Frothingham.....	Heating, weather strips, equipment, etc.....	450 00
Gaston.....	Lavatory, tinting, painting, equipment, etc.	175 00
Gilbert Stuart.....	Lavatory, gas light, etc.....	140 00
Henry L. Pierce.....	Heat and equipment.....	75 00
Hillside.....	Lavatory, equipment, tinting, etc.....	57 00
John A. Andrew.....	Awaiting report.....	
Lincoln.....	Building room, lavatory, equipment.....	365 00
Lowell.....	Lavatory, equipment, etc.....	123 00
Martin.....	Lavatory, equipment, etc.....	98 00
Mary Hemenway.....	Equipment.....	50 00
Mather.....	Lavatory.....	100 00
Minot.....	Carpentry.....	25 00
Phillips Brooks.....	Laying floor, lavatory, equipment.....	140 00
Prescott.....	Building room, tinting, painting, lavatory, light, equipment.....	365 00
Sherwin.....	Lavatory, tinting, equipment, etc.....	184 50
William E. Russell.....	Lavatory, electric heater.....	215 00

APPENDICES.

APPENDIX I.

APPROPRIATION FOR LAND AND BUILDINGS FOR SCHOOLS.

I.

GENERAL STATEMENT.

The following statement shows the expenditures on account of the above appropriation from February 1, 1908, to February 1, 1909:

February 1, 1908, balance	
of appropriation.	<u>\$2,098,578 08</u>

EXPENDITURES.

Expended for sanitation:	
Painting latrines	\$165 82
Amount expended for fire protection:	
Fire extinguishers and escapes	619 00
Expended for sites, erecting, grading and planting of lots and furnishing new buildings:	

Charlestown High.

Building	\$2,093 47	
Furnishing	2,917 50	
	5,010 97	

Extension Francis Parkman.

Building	\$45,399 33	
Furnishing	3,647 51	
	49,046 84	

<i>Carried forward</i>		\$54,842 63
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SCHOOLHOUSE DEPARTMENT.

49

Brought forward \$54,842 63

Extension Mechanic Arts High.

Building		\$350,436 39	
Furnishing		3,122 46	
			353,558 85

Normal and Latin School Group.

Building		\$33,233 71	
Furnishing		16,552 28	
			49,785 99

Elementary School, Phillips District.

Building			5,257 50
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Hobart Street, Bennett District.

Building		\$73 36	
Furnishings		210 58	
			283 94

Manual Training, Quincy District.

Building		\$6,030 91	
Furnishings		306 50	
			6,337 41

Grammar School, City Point.

Site			2,334 50
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Addition Dorchester High.

Building		\$7,550 00	
Furnishings		326 00	
			7,876 00

Elementary, Plummer, Alterations.

Building		\$6,672 47	
Furnishings		635 03	
			7,307 50

Elementary, Winthrop-Brimmer District.

Building		\$57,652 75	
Borings		63 50	
			57,716 25

Grammar School, Dearborn District.

Building			836 03
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<i>Carried forward</i>			\$546,136 60
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<i>Brought forward</i>			\$546,136 60
<i>Grammar School, Edward Everett District.</i>			
Building			59,527 58
<i>Winchell School Addition.</i>			
Building		\$205 29	
Furnishing		59 77	
			265 06
<i>Eliot School, Master's Office.</i>			
Building		\$4,324 84	
Furnishing		142 57	
			4,467 41
<i>Elementary School, Adams District.</i>			
Building		\$1,395 69	
Furnishing		220 00	
			1,615 69
<i>Elementary School, Blackinton District.</i>			
Building			40,600 85
<i>Elementary School, Dudley District.</i>			
Building			22,568 85
<i>Elementary School, Longfellow District.</i>			
Building			40 00
<i>Fire Protection.</i>			
Fire escapes		\$29,191 68	
Fire alarm		22,892 36	
Fire protection		11,548 52	
Fire hose and extinguishers		866 51	
			64,499 07
<i>Miscellaneous.</i>			
Engineering expenses		\$1,990 12	
Incidental expenses, including salaries, blue prints, engineer supplies, stationery, car fares and travelling expenses		29,308 27	
			31,298 39
Total expenditures of 1908-09			\$771,019 50
<i>Carried forward</i>			\$771,019 50

<i>Brought forward</i>	\$771,019 50
Amount voted and set aside, but not expended to date by Schoolhouse Commissioners for fire protection, engineering and office expenses, sites, construction and furnishing of new buildings	1,317,104 81
Balance of appropriation undistributed . . .	10,453 77
	<u>\$2,098,578 08</u>

II.

SUBDIVISION OF EXPENDITURES.

Land and Buildings for Schools, 1908-09.

High Schools	\$416,231 81
Elementary Schools	251,868 00
Fire Protection	65,118 07
Manual Training School	6,337 41
Miscellaneous Expenses	31,464 21
Total expenditures	<u>\$771,019 50</u>

III.

Statement of Income, Land and Buildings for Schools.

Amount received from sale of old buildings .	\$505 00
Total	<u>\$505 00</u>

APPENDIX II.

APPROPRIATION FOR REPAIR AND ALTERATION WORK, NEW EQUIPMENT, FURNITURE (NEW AND REPAIRS TO OLD), RENTS AND TAXES, AND EXPENSES OF THE COMMISSION.

I.

GENERAL STATEMENT.

During the year February 1, 1908, to February 1, 1909, the following sums were expended by the Schoolhouse Department for Repair and Alteration Work, new Equipment, Furniture (new and repairs to old), Rents and Taxes, and Expenses of the Commission:

February 1, 1908, appropriation	<u>\$333,500 00</u>
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Repairs and Equipment.

Carpentry:

Repairs and alteration work	\$54,058 30
Flagstaffs and repairs	1,743 54
Locksmithing	1,902 77

Furniture:

New and repairs	36,529 60
Gymnasium apparatus	430 67

Blackboards:

New slate	2,820 37
Repairs	1,784 99

Plumbing:

Repairs and installing new	12,036 30
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Roofing:

Repairs and installing new	17,928 76
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Painting:

Painting, whitening, glazing	17,909 53
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<i>Carried forward</i>	<u>\$147,144 83</u>
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Brought forward \$147,144 83

Heating:

Repairs and installing new apparatus	40,731 56
Ventilation, galvanized iron-work	3,247 49
Motors and engines	1,634 83
Insurance on boilers	3,577 32

Masonry:

Repairs and alteration work	42,745 04
Grading yards	2,372 65
Asphalting	1,226 90
Shoring buildings	1,081 47
Planting and care of lawns	708 23
Concreting	591 04
Exterminating Gypsy Moths	552 63
Cleaning vaults	29 10

Electrical:

Electric wiring and fixtures	6,499 73
Electric bells and telephone systems	5,971 72
Gas fixtures and installation	3,023 97

Fire Protection:

Fire protection	5,211 97
Fire hose and extinguishers	801 90
Fire escapes	407 01
Fire alarm	321 54

Miscellaneous:

Iron and wire work	4,433 52
Care and cleaning	1,646 38
Teaming	1,265 57
Janitors' supplies	507 75
Advertising, plans, etc.	258 17
Rubber treads and matting	126 81

Administration Expenses.

Salaries, Commissioners and Clerks	\$12,508 83
Salaries, Inspectors	14,699 21
Automobile expenses	2,908 97
Rental of offices	2,100 00
Auxiliary fire alarm rental	2,078 18
Electric clock systems, care of	1,749 27
Printing and postage	1,705 21

Carried forward \$313,868 80

<i>Brought forward</i>		\$313,868 80
Horsekeeping	1,325 38	
Car fares, travelling expenses	1,109 62	
Care of office and electric light	1,076 50	
Stationery, supplies, etc.	804 22	
Telephone and messenger service	764 50	
Subscription Dun's Agency	105 00	
Office furniture and repairs	70 48	
Ice	21 60	

Total repairs and administration expenses		319,146 10
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Hired Buildings, Rents and Taxes.

Beech-street Lot, Roslindale	\$125 00
Bennington-street lot, East Boston	240 00
Bennington street (Baker Congregational Church)	120 00
Chambers street, 27	856 90
Chambers street, 38 (St. Andrew's Church)	1,080 00
Chambers street, 103	1,636 00
Church street, 30	63 00
Centre street lot, Dorchester	200 00
Columbus avenue, 1446	74 00
Columbus avenue, 1448 (All Saints' Hall)	2,400 00
East Fourth street, 448	613 00
Eliot street, Jamaica Plain (Trustees' Building)	300 00
Hewlett street, 17	240 00
Jordan Hall	30 00
Lauriat avenue, 170	1,200 00
Parmenter street, 20	1,013 00
Saratoga street, 399	300 00
South street (Roslindale Unitarian Church)	600 00
Walnut street (Trinity Congregational Church)	400 00
Walnut street (Walnut Hall)	300 00
Walnut street (Appleton Methodist Episcopal Church)	150 00
Warrenton street, 63A	1,213 00
Washington street (Boston Female Asylum)	1,200 00

Total rents and taxes		14,353 90
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Grand Total		<u>\$333,500 00</u>
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II.

SUBDIVISION OF EXPENDITURES.

Elementary schools	\$244,274 19
Administration and incidental expenses . .	53,717 23
High Schools	33,949 23
School Committee Building	1,559 35
	\$333,500 00'

III.

SUBDIVISION AS TO SCHOOLS.

Aaron Davis	\$631 45
Abby W. May	515 72
Aberdeen	160 89
Adams	969 73
Adams and Chestnut street	246 44
Adams Street	357 89
Agassiz	597 96
Albert Palmer	541 44
Andrews	1,076 19
Appleton Street	3,238 17
Asa Gray	401 66
Atherton	365 33
Auburn	553 63
Austin	344 54
Bailey Street	347 86
Baldwin	2,833 54
Bartlett Street	801 83
B. F. Tweed	193 94
Benjamin Cushing	311 72
Benjamin Dean	472 08
Benjamin Pope	377 35
Bennett	759 79
Bennett Branch	133 07
Bigelow	2,694 90
Blackinton	849 66
Bowditch	1,233 29
Bowdoin	2,456 32
Brewster	529 32
Brewster Annex	87 31
Brighton High	2,566 30
Brimmer	1,544 87
Bunker Hill Grammar	1,266 49
Bunker Hill Primary	775 03
Canterbury Street	84 85
Carried forward	\$30,320 56

<i>Brought forward</i>	.	.	.	.	.	.	\$130,652 97
Mayhew	.	.	.	.	.	.	515 60
Mead Street	.	.	.	.	.	.	228 24
Mechanic Arts High	.	.	.	.	.	.	582 32
Medford Street	.	.	.	.	.	.	595 21
Minot	.	.	.	.	.	.	1,051 82
Mt. Pleasant Avenue	.	.	.	.	.	.	251 96
Mt. Vernon Street	.	.	.	.	.	.	559 58
Miles Standish	.	.	.	.	.	.	923 13
Nathaniel Hawthorne	.	.	.	.	.	.	530 72
Noble	.	.	.	.	.	.	480 69
Noble Annex	.	.	.	.	.	.	54 18
Norcross	.	.	.	.	.	.	1,276 96
Normal	.	.	.	.	.	.	171 07
North Margin Street	.	.	.	.	.	.	125 05
Oak Square	.	.	.	.	.	.	150 12
Old Agassiz	.	.	.	.	.	.	136 21
Old Baker Street	.	.	.	.	.	.	41 25
Old Brighton High	.	.	.	.	.	.	10 88
Old Dearborn	.	.	.	.	.	.	718 93
Old East Boston High	.	.	.	.	.	.	857 59
Old Edward Everett	.	.	.	.	.	.	365 25
Old Gibson	.	.	.	.	.	.	1,052 56
Old Ira Allen	.	.	.	.	.	.	140 51
Old Mather	.	.	.	.	.	.	3,026 55
Old Parkman	.	.	.	.	.	.	575 86
Oliver Hazard Perry	.	.	.	.	.	.	569 36
Oliver Wendell Holmes	.	.	.	.	.	.	1,573 38
Parkman	.	.	.	.	.	.	477 66
Patrick A. Collins	.	.	.	.	.	.	127 09
Paul Jones	.	.	.	.	.	.	2,822 19
Paul Revere	.	.	.	.	.	.	1,384 10
Phillips	.	.	.	.	.	.	1,682 04
Phillips Brooks	.	.	.	.	.	.	2,253 54
Phillips Street	.	.	.	.	.	.	195 58
Phineas Bates	.	.	.	.	.	.	77 26
Pierpont	.	.	.	.	.	.	617 73
Plummer	.	.	.	.	.	.	589 25
Polk Street	.	.	.	.	.	.	409 50
Pormort	.	.	.	.	.	.	337 06
Prescott	.	.	.	.	.	.	937 45
Prescott Annex	.	.	.	.	.	.	52 48
Prince	.	.	.	.	.	.	1,601 69
Public Latin	.	.	.	.	.	.	1,422 92
Quincy	.	.	.	.	.	.	19,125 74
Quincy Street	.	.	.	.	.	.	265 70
Rice Training	.	.	.	.	.	.	3,360 41
Robert G. Shaw	.	.	.	.	.	.	1,219 07
Roger Clap	.	.	.	.	.	.	657 20
Roger Wolcott	.	.	.	.	.	.	2,006 78
<i>Carried forward</i>	.	.	.	.	.	.	\$188,840 39

<i>Brought forward</i>	\$188,840 39
Roxbury High	2,526 78
Rutland Street	510 67
Samuel G. Howe	284 67
Samuel W. Mason	1,389 22
Sarah J. Baker	742 95
Savin Hill	295 88
Savin Hill Avenue, No. 141	1,169 44
School Street	109 68
Sharp	913 51
Sherwin	2,411 33
Shurtleff	1,441 16
Simonds	94 88
Skinner	503 55
Smith Street	216 10
Somerset Street	315 33
South Boston High	2,494 02
Stephen M. Weld	257 99
Stoughton	663 04
Tappan	333 44
Thetford Avenue	593 18
Thomas Gardner	1,001 96
Thomas N. Hart	797 22
Thornton Street	124 14
Tileston	674 37
Tuckerman	236 42
Tyler Street	4,642 38
Union Street	25 00
Wait	612 94
Walnut Street	8,980 34
Warren	1,177 51
Washington	3,312 89
Washington Allston	1,485 02
Washington Allston Annex	237 46
Washington Street (Forest Hills)	286 39
Washington Street (Germantown)	82 41
Way Street	320 63
Wells	4,055 23
West Concord Street	623 30
West Roxbury High	1,362 87
William Bacon	590 65
William E. Endicott	396 76
William E. Russell	1,429 95
William H. Kent	890 83
William Wirt Warren	559 12
Williams	122 78
Winchell	356 07
Winship	1,550 12
Winthrop	1,439 09
Winthrop Street	3 50
<i>Carried forward</i>	\$243,484 56

<i>Brought forward</i>	\$243,484 56
W. L. P. Boardman	1,083 54
Wyman	415 32
Administration and incidental expenses	53,717 23
Portable Buildings (101)	16,735 69
School Committee Building	1,559 35
Kindergarten, No. 12 Carver Street	195 75
Dennison House	59 27
Spectacle Island School	28 00
Open Air School, Parker Hill	28 00
St. John's School, Moon Street	69 00
Lincoln House	14 80
Kindergarten, Ruggles Street	9 75

Hired Buildings, Rents, Taxes and Repairs.

Beech Street Lot, Roslindale	125 00
Bennington Street Lot, East Boston	240 00
Bennington Street (Baker Congregational Church)	120 00
Chambers Street, No. 27	902 55
Chambers Street, No. 38 (St. Andrew's Chapel)	1,165 95
Chambers Street, No. 103	2,124 67
Church Street, No. 30	71 80
Centre Street Lot, Dorchester	200 00
Columbus Avenue, No. 1446	74 00
Columbus Avenue, No. 1448 (All Saints' Hall)	2,688 71
East Fourth Street, No. 448	693 13
Eliot Street, Jamaica Plain (Trustees Building),	340 35
Hewlett Street, No. 17	260 93
Jordan Hall, Huntington Avenue	30 00
Lauriat Avenue, No. 170	1,221 75
Parmenter Street, No. 20	1,042 25
Saratoga Street, No. 399	307 00
South Street (Roslindale Unitarian Church)	622 00
Walnut Street (Trinity Congregational Church)	400 00
Walnut Street (Walnut Hall)	300 00
Walnut Street (Appleton Methodist Episcopal Church)	150 00
Warrenton Street, No. 63A	1,716 48
Washington Street, 1,008, (Boston Female Asylum)	1,303 17
Total	<u>\$333,500 00</u>

IV.

STATEMENT OF INCOME.

Received from sale of old furniture, etc.	\$2,104 58
Total	<u>\$2,104 58</u>

APPENDIX III.

HIRED BUILDINGS.

I.

Rooms in the following buildings have been hired for school purposes; rents, taxes, water rates, heating, lighting and janitors' expenses paid for the same, amounting to \$14,353.90, during the year from February 1, 1908, to February 1, 1909:

For	Location.	Remarks.
Blackinton District, Primary Class.....	Bennington street, Baker Congregational Church..	Rent per annum, \$600, from Oct. 19, 1908, including heat and janitor service.
Blackinton District.....	Bennington street, for Portable Building, 51...	Rent per annum, \$240, for use of land only.
Comins District, Primary Class..	1446 Columbus avenue....	Rent per annum, \$240, from Sept. 10, 1908, not including heat and janitor service.
Comins District, Kindergarten and Primary Classes.....	Germania Hall, Columbus avenue, 1448.....	Rent per annum, \$2,400, including heat and janitor.
Dorchester High School.....	Centre street, Dorchester, for Portable Buildings 10, 31, and 32.....	Rent per annum, \$200. for use of land only.
Emerson District, Primary Class.....	Saratoga street, 399.....	Rent per annum, \$300, not including heat or janitor.
Franklin District, Primary Classes.....	Asylum Building, Washington street, 1008.....	Rent per annum, \$1,200. City to furnish fuel.
Girls' High School of Practical Arts, Domestic Science.....	Church street, No. 30.....	Rent per annum, \$216, from Sept. 16, 1908, not including heat and janitor service.
*Hancock District, Kindergarten and Primary Classes.....	Parmenter street, 20.....	Rent per annum, \$1,000, including heat and janitor.
Longfellow District, Primary Classes.....	Beech street, Phineas Bates Portable Building, 12....	Rent per annum, \$125, for use of land only

* Vacated during the year.

HIRED BUILDINGS.— *Concluded.*

For	Location.	Remarks.
Longfellow District, Primary Class.....	Hewlett street, 17.....	Rent per annum, \$240, not including heat or janitor.
Longfellow District, Kindergarten Class.....	Unitarian Church, Roslindale	Rent per annum, \$600, including heat and janitor.
Manual Training School.....	Eliot street, Jamaica Plain,	Rent per annum, \$300, including heat and janitor.
Roger Wolcott District, Kindergarten and Primary Class.....	Lauriat avenue, 170, Dorchester.....	Rent per annum, \$1,200, including heat, water and janitor.
Shurtleff District, Kindergarten and Cooking School.....	East Fourth street, 484, South Boston.....	Rent per annum, \$600, not including heat, water, or janitor.
Washington District, Special and Ungraded Class.....	Chambers street, 103.....	Rent per annum, \$1,620, from Oct. 10, 1907, including heat and janitor.
Wells District, Primary Classes..	Chambers street, 27.....	Rent per annum, \$800. City pays one-half cost of gas and water rates, also pays for janitor and heating.
Wells District, Kindergarten and Grammar Classes.....	Chambers street, 38.....	Rent per annum, \$1,080, including heat, janitor, and water rates.
Winthrop District, Grammar Classes.....	Warrenton street, 63-63A.	Rent per annum, \$1,200. City pays water rates, heating and janitor.

II.

SUBDIVISION OF EXPENDITURES.

Amounts paid from appropriation for rents and taxes, for each hired building during the year 1908-09:

Beech-street lot, Roslindale	\$125 00
Bennington-street lot, East Boston	240 00
Bennington street (Baker Congregational Church)	120 00
Centre street lot, Dorchester	200 00
Chambers street, 27, West End	856 90
Chambers street, 38, St. Andrew's Chapel	1,080 00
Chambers street, 103	1,636 00
Church street, 30	63 00
Columbus avenue, 1446	74 00
East Fourth street, 484, South Boston	613 00
Eliot street, Jamaica Plain, Trustee Building	300 00
Germania Hall, 1448 Columbus ave., Roxbury	2,400 00
Hewlett street, 17, Roslindale	240 00
*Jordan Hall	30 00
Lauriat avenue, 170, Dorchester	1,200 00
†Parmenter street, 20, North End Union	1,013 00
Saratoga street, 399, East Boston	300 00
Unitarian Church, Roslindale	600 00
‡Walnut street (Trinity Congregational Church), ...	400 00
‡Walnut street (Walnut Hall)	300 00
‡Walnut street (Appleton Methodist Episcopal Church)	150 00
Warrenton street, 63 and 63A, City Proper	1,213 00
Washington street, 1008, City Proper, in rear	1,200 00
	<u>\$14,353 90</u>

* Hired for graduation exercises of Mechanic Arts High School, on account of work being done at building.

† Vacated during the year.

‡ Hired on account of fire, Walnut-street School.

APPENDIX IV.

Table Showing Cost of Buildings, Cost per Cubic Foot, Children Accommodated, and Cost per Pupil.

NAME OF SCHOOL BUILDING.	Grade.	Building, Heating, Plumbing, and Electrical Contracts.	Total Cost of Building.	PERCENTAGE CONTRACTS BEAR TO TOTAL COST OF BUILDING.				Cubical Contents.	Cost per Cubic Foot.	PROPORTION CON- TRACTS BEAR TO COST PER CUBIC FOOT.				Cubic Feet, Class Room.	Children Accommodated.	Cost per Pupil.
				Bldg.	Heat.	Plumb.	Elec.			Bldg.	Heat.	Plumb.	Elec.			
Marshall.....	P.	B., \$106,516 75 H., 9,483 00 P., 5,197 00 E., 3,270 90	\$124,467 65	85	8	4	3	516,624	24	20	2	1	1	37,000	700	\$177 81
William E. Russell.....	G.	B., \$158,189 52 H., 15,132 40 P., 9,580 29 E., 5,622 35	188,524 56	84	8	5	3	894,941	21	17	2	1	1	50,000	900	209 47
Farragut.....	P.	B., \$127,262 98 H., 12,432 00 P., 6,821 45 E., 4,010 00	150,526 43	85	8	4	3	652,630	23	19	2	1	1	47,000	700	215 04
Paul Jones.....	P.	B., \$95,095 75 H., 10,376 00 P., 5,324 00 E., 3,574 60	114,370 35	83	9	5	3	510,386	22	18	2	1	1	36,000	700	163 39
Ellis Mendell.....	P.	B., \$103,569 20 H., 9,625 04 P., 5,658 11 E., 3,414 85	122,267 20	85	8	4	3	517,035	24	20	2	1	1	43,000	600	203 78
Jefferson.....	G.	B., \$182,261 94 H., 16,927 15 P., 6,449 90 E., 5,251 50	210,890 49	86	8	3	3	856,777	24	20	2	1	1	45,000	950	221 99

Washington.....	G.	B., \$263,661 16 H., 28,305 94 P., 21,417 05 E., 12,157 45	82	7	7	4	1,300,792	25	20	2	2	1	43,000	1,500	217 03
Christopher Columbus..	P.	B., \$136,966 08 H., 16,244 00 P., 15,519 00 E., 4,783 00													
John Boyle O'Reilly....	P.	B., \$95,712 50 H., 10,227 00 P., 4,040 00 E., 2,859 50	79	9	9	3	727,068	23	18	2	2	1	30,000	1,200	144 59
Oliver Hazard Perry....	G.	B., \$118,497 38 H., 17,621 50 P., 5,094 00 E., 4,932 75	85	9	4	2	450,248	25	21	2	1	1	32,000	700	161 20
Mather.....	G.	B., \$241,098 44 H., 27,807 00 P., 11,645 50 E., 8,782 05	81	12	4	3	612,351	24	19	3	1	1	44,000	700	208 78
Thomas Gardner *.....	G.	B., \$113,769 15 H., 15,994 04 P., 6,038 00 E., 4,466 38	83	10	4	3	1,353,831	21	17	2	1	1	42,000	1,600	180 83
Oliver Wendell Holmes,	G.	B., \$159,563 85 H., 21,930 18 P., 8,037 00 E., 6,116 99	81	12	4	3	735,573	19	15	2	1	1	52,000	700	200 38
Samuel W. Mason.....	P.	B., \$99,527 64 H., 10,447 00 P., 4,990 00 E., 3,360 00	81	12	4	3	991,609	20	16	2	1	1	41,000	1,200	163 04
Dearborn	G.	B., \$182,240 82 H., 20,874 00 P., 8,929 50 E., 5,087 00	84	9	4	3	438,223	27	23	2	1	1	31,000	700	169 03
John Greenleaf Whittier	P.	B., \$61,053 55 H., 7,540 70 P., 3,551 00 E., 2,590 90	84	9	4	3	980,100	22	18	2	1	1	47,000	1,050	206 66
			82	10	5	3	325,051	23	19	2	1	1	32,000	500	149 47

Table Showing Cost of Buildings, Cost per Cubic Foot, Children Accommodated, and Cost per Pupil. — *Concluded.*

NAME OF SCHOOL BUILDING.	Grade.	Building, Heating, Plumbing, and Electrical Contracts.	Total Cost of Building.	PERCENTAGE CONTRACTS BEAR TO TOTAL COST OF BUILDING.				Cubical Contents.	Cost per Cubic Foot.	PROPORTION CON- TRACTS BEAR TO COST PER CUBIC FOOT.				Cubic Feet, Class Room.	Children Accommodated.	Cost per Pupil.
				Bldg.	Heat.	Plumb.	Elec.			Bldg.	Heat.	Plumb.	Elec.			
James Otis.....	P.	B., \$90,867 00 H., 8,767 00 P., 4,889 00 E., 3,295 00	\$107,818 00	84	8	4	4	Per Ct. Per Ct. Per Ct. Per Ct.	Cents	Cents	Cents	Cents	Cents	34,000	600	179 70
Tuckerman.....	P.	B., \$61,875 79 H., 8,422 00 P., 4,226 70 E., 2,898 76	77,423 25	80	11	5	4		23	18	3	1	1	33,000	500	154 85
Wm E. Endicott.....	P.	B., \$64,745 25 H., 7,951 00 P., 3,667 91 E., 2,693 61	79,057 77	82	11	4	3		23	18	3	1	1	35,000	500	158 11
Sarah J. Baker.....	P.	B., \$130,016 23 H., 18,673 00 P., 7,625 00 E., 4,880 00	161,194 23	81	11	5	3		23	18	3	1	1	29,009	1,200	134 32
Nathaniel Hawthorne..	P.	B., \$54,682 82 H., 7,518 00 P., 3,100 00 E., 2,611 25	67,912 07	80	11	5	4		24	19	3	1	1	31,000	450	150 92
Charlestown High.....	H.	B., \$253,157 94 H., 18,711 25 P., 13,970 00 E., 10,216 00	296,055 79	86	6	5	3		23	19	2	1	1	.....	540	548 25
NORMAL AND LATIN GROUP.																
Common Building.....	H.	B., \$276,559 15 H., 26,338 97 P., 13,169 48 E., 13,169 48	329,237 08	84	8	4	4		23	19	2	1	1	.....	350	940 65
Normal School.....	H.															

APPENDIX V.

ARCHITECTS' SERVICES.

Every Architect employed by the Schoolhouse Commissioners of the City of Boston as the Architect for erecting a building is to perform the duties hereinafter provided.

SECTION 1.— *The Board*.— (a.) Is to furnish the Architect with the requirements and information for the design and construction of the building for which he is the Architect, and give the approximate cubical contents and proposed cost per cubic foot thereof.

(b.) Is to provide the services of domestic engineers to confer with the Architect during the preparation of preliminary studies, and when these are accepted by the Board to advise the Architect in the details of their work, and make the necessary working drawings and specifications for, and have the direction of, the heating, ventilating, and electric work for the building, said work being hereinafter designated as the domestic engineering;

(c.) Is to give the grade and lines of streets and adjoining lots;

(d.) Is to make all borings necessary to determine the quality of the foundations, and on request of the Architect, or of any person doing work on the building, furnish him full information relating to the above, the sewer, water, gas and electric service, and to the rights, restrictions, and boundaries of the lot on which the building is to be constructed.

SECT. 2.— *The Architect*.— (a.) Is to consult and advise with the Board and make such preliminary studies as will acquaint the Board with the contemplated arrangement, design, construction and cubical contents of the building, and enable it to agree with the Architect upon a definite limit of cost therefor, and to accept said preliminary studies as the basis of working drawings and specifications;

(b.) Is to make upon the basis of said preliminary studies one complete set of working drawings in ink on tracing cloth, floor and framing plans, sections and elevations at one-eighth scale, and such detail drawings on a larger scale as are necessary to explain the specifications;

(c.) Is to furnish, revise and correct for the printer one complete set of specifications for everything to be furnished or done in constructing the building, except the domestic engineering;

(*d.*) Is to loan to the Board, to make blue prints therefrom, the said set of working drawings;

(*e.*) Is to restudy and if necessary redraw, without charge, any or all of said drawings and specifications, if, owing to an unwarranted departure from the approved preliminary studies or to a needlessly extravagant or elaborate interpretation of them in said drawings and specifications, the lowest bid for doing the work in accordance therewith over-runs the limit of cost agreed upon by the Architect and the Board;

(*f.*) Is, upon the signing of contract, to deliver to the Board, to remain their property, two sets of blue prints mounted on cloth taken from the said set of working drawings, a perspective drawing of the exterior of the building suitable for reproduction, and at the conclusion of the work, a complete set of working drawings on tracing cloth, either the set previously referred to or a copy therefrom, which shall be corrected to agree with and embody all changes made during construction.

(*g.*) Is to make application for a building permit to the Building Department on a form signed by the Chairman of the Board, and deliver to the Building Department two sets of such blue prints from the said set of working drawings as may be required by the Building Department (the Board furnishing specifications to the Building Department);

(*h.*) Is to have general supervision of the domestic engineering and be the Architect of all other work to be done under any written contract for the construction of the building and render the full usual Architect's services, and supervision for such other work;

(*i.*) Is, in the form prescribed by the Board, to make all estimates and allowances for payments under any contract in which he is made the Architect of the work, and such estimates for the domestic engineering are to be accompanied by certificates of said Engineers as to their accuracy;

(*j.*) Is to advise with the Board on any changes in the building contemplated by the Board, and is to order changes when required by the Board so to do;

(*k.*) Is to cause the drawings and specifications furnished by him to conform to all regulations of law and public authorities, and to be in accordance with established methods of building construction, faithfully carry out all the foregoing provisions, use all proper knowledge, skill, and care therein, and be accountable for any failure so to do.

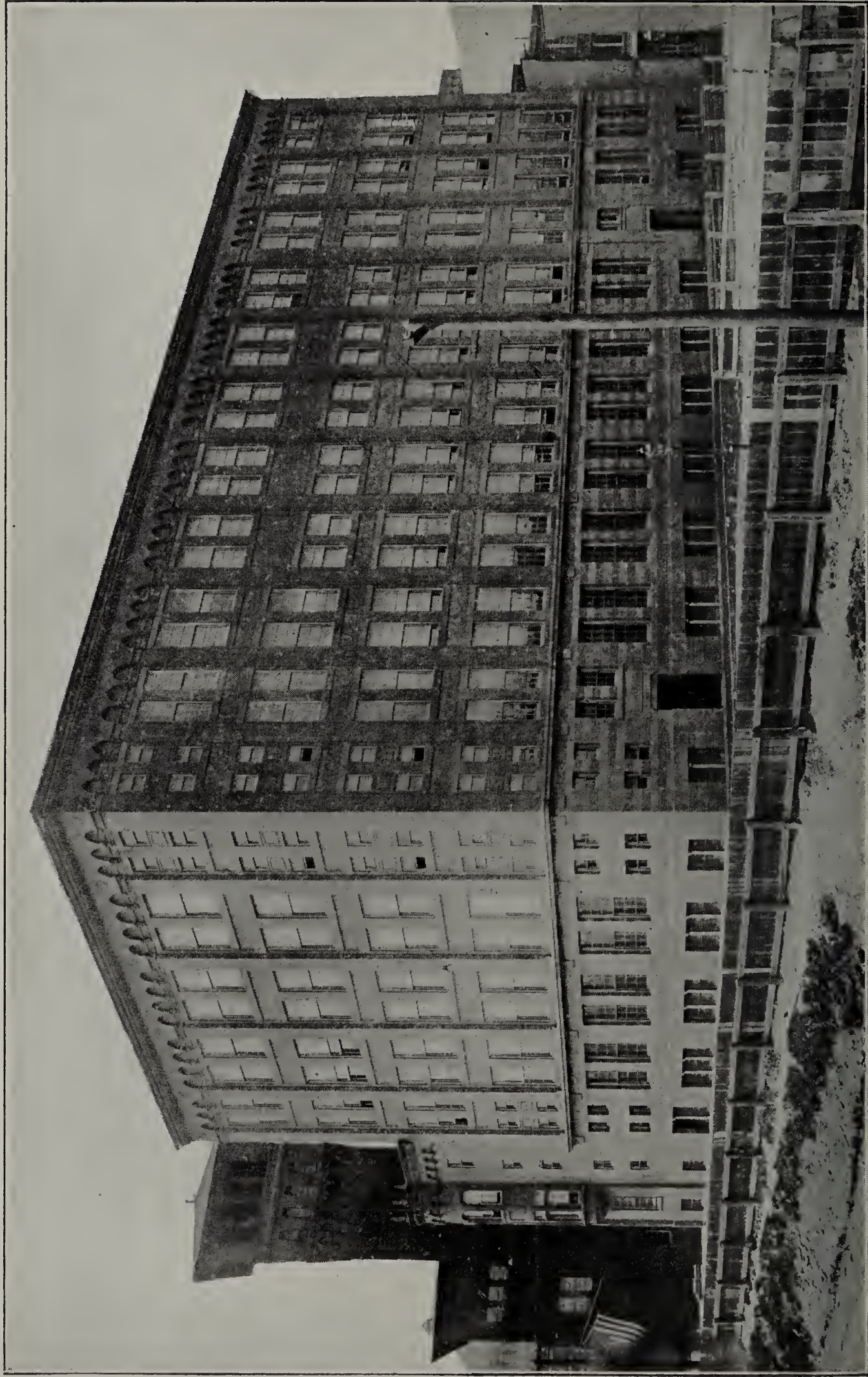
SECT. 3.—The city, as full compensation for the services aforesaid, is to pay the Architect $2\frac{1}{2}$ per cent upon the cost of the domestic engineering, and 5 per cent upon the cost of all other work, payments to be made as follows: $2\frac{1}{2}$ per cent upon all contracts other than those for domestic engineering is to be paid on the signing of such contracts, and thereafter $2\frac{1}{2}$ per cent upon the value of the materials and labor, as specified in each estimate for payment under the contract, is to be paid on the making of the estimate, until the full payment aforesaid is made,

and if any thereof remains unpaid at the completion of the work it is then to be paid. When preliminary studies are completed, the value of the Architect's services to date shall be reckoned one-fifth of the estimated total commission; when working drawings and specifications are ready for contract, the value of his services to date shall be reckoned as three-fifths of said commission. If the Board discontinue the services of the Architect at any intermediate stage the value of his services shall be reckoned proportionately.

SECT. 4.— When for any reason other than those stated in section 2, paragraph *e*, above, the Board shall set aside the whole or any part of an Architect's studies, drawings, and specifications while retaining him to prepare corresponding new studies, drawings, and specifications, for the same school building, the city shall pay the Architect for the work thus set aside a sum not exceeding three times the actual cost of draughting, and the new work shall be paid for on a commission basis as stated in section 3, above.

SECT. 5.— In the above agreement the term "building" is used to define not only the structure itself, but all work in connection with it committed to the Architect by the order of the Board, as fencing, grading, roads, walks, planting, decorative painting, and sculptural decoration.

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EXTENSION, MECHANIC ARTS HIGH SCHOOL, SCOTIA STREET, BOSTON.
WHEELWRIGHT & HAVEN, Architects

APPENDIX VI.

NEW BUILDINGS.

LIST OF 1907.

Item 5.—The Mechanic Arts High School. The item for the extension of this school includes (a) the new building, (b) the transformation of the class-rooms of the old building into shops and drawing-rooms, (c) the rebuilding of the old basement floors and extensive readjustments of the old heating apparatus and plumbing. The work under (c) was unavoidable, consequently its cost, \$30,465.40, should not be considered a part of the cost of the extension.

The work of excavating for the new building was begun about December 1, 1907. It was soon discovered that the borings had not given reliable information concerning the character of the site, and it became necessary to abandon pile foundations and make new drawings for concrete foundations. In spite of the embarrassments and delays resulting from this change, the new building was occupied January 4, 1909, and the entire work will be substantially completed March 1, 1909.

The site of the extension is on the north side of the old building, with a frontage of 88.09 feet on Dalton street and 184.42 feet on Scotia street. The extension covers the entire area except a 10-foot alley at the west end. Area of the old site, 22,881 square feet; new site, 14,419 square feet—total, 37,300 square feet.

The new building is of first class fireproof construction, five stories, flat roof, exterior in common red brick, with red sandstone trimmings to harmonize with the old building. It provides for a chemical lecture-room, a physical laboratory, a library, a science lecture-room, a drawing-room, an addition to the master's office, twenty-six class-rooms, and an assembly hall seating 1,100. On each floor at the northeast corner is a lavatory for pupils, and on the mezzanine directly over each lavatory is a teacher's room.

The seatings of the chemical lecture-room and the science lecture-room are of a special type well adapted to economize space. They afford convenient storage for text books, so that these rooms can be used as home rooms for pupils. There are two rooms in the old building which may also be used as home rooms. The entire plant provides for about 1,500 pupils without very serious overcrowding.

On the first floor of the old building will be three machine shops; on the second floor four wood-working rooms, and on the third floor two wood-turning rooms and two drawing-rooms. It is expected that the new equipment will be substantially completed before the beginning of the next school year.

The basement of the new building contains the coal-room, boiler and engine rooms, lavatories, and a lunch-room, equipped with a counter, 75 feet long, a large gas range, two steam tables for keeping food warm, and an ice chest. Special attention has been given to the fitting of this room on account of the long daily session which makes it imperative that every boy should have a substantial lunch.

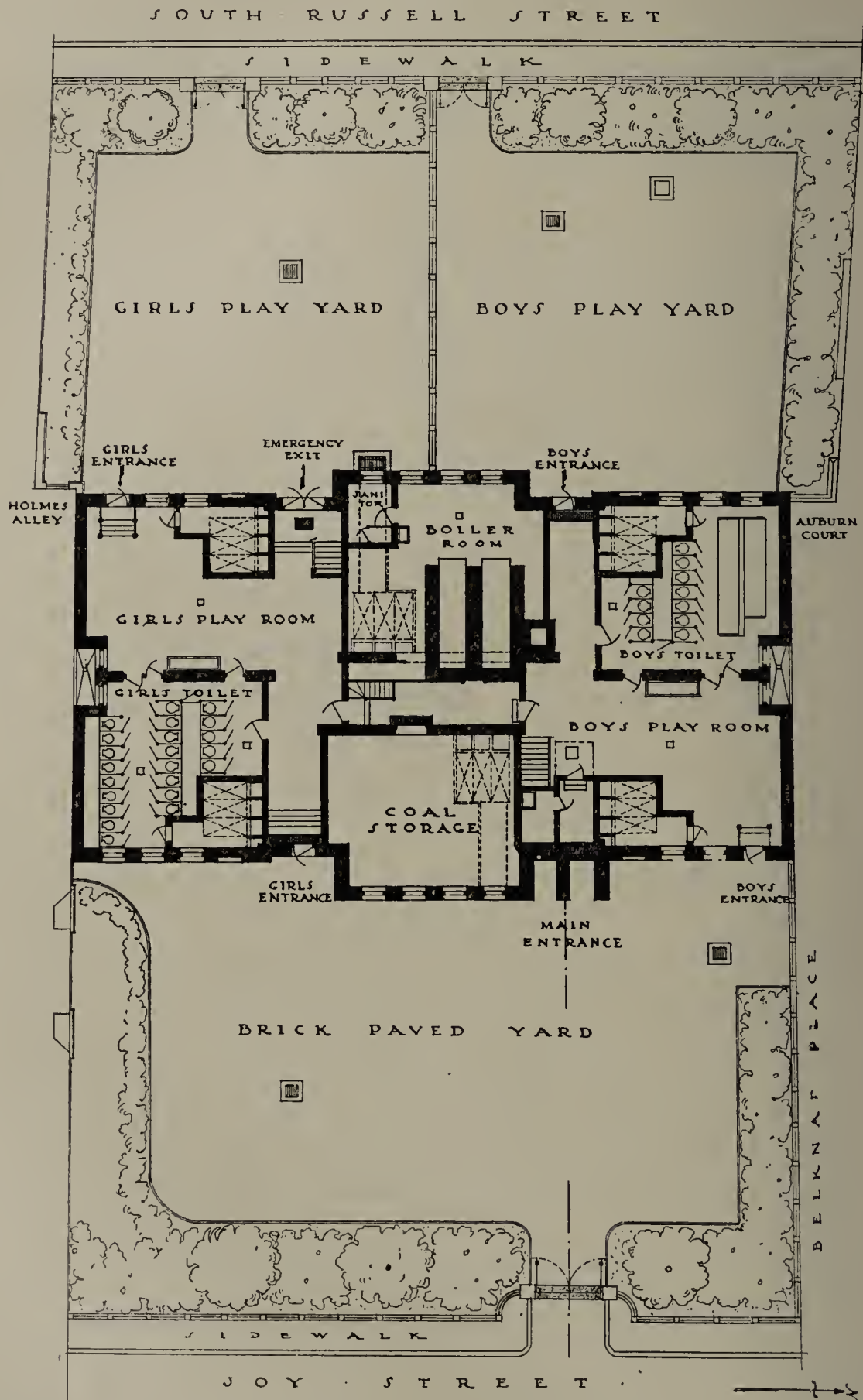
At the west end of the basement, in a one-story structure outside the main building, is a battery of three tubular boilers capable of generating 425 horse power. Current is conveyed to motors in each of the mechanical departments and to the motor that drives the fans from two units each, consisting of a direct connected engine and a 100-kilowatt generator. Adequate provision has been made for emergencies, since each of these units will furnish most of the power ordinarily required.

In the apparatus room on the second floor of the old building is a motor generator set consisting of a direct current motor, a direct current generator, and an alternating current generator. The latter will furnish three-phase alternating current at sixty cycles. The generators have a capacity of one kilowatt each, and the voltage may be varied from about one volt to twenty volts. All of these machines are connected to a switchboard on which are mounted controlling apparatus for the generators, measuring instruments, and the switches of the circuits to the various lavatories. The direct current is furnished to all laboratories and to the students' tables. The alternating current is supplied to the demonstration tables in the physical laboratories and the science lecture hall. In the various laboratories there are rheostats for controlling the voltage of the two generators and switches to control the currents supplied to the students' tables. Each student has a special connection board with binding posts, switch and fuse, from which current may be taken for the experiment to be performed. These switches and the wiring which supplies them are so arranged that the same current may be supplied to each student or that each student may have as much as may be necessary for his work. The instructor may connect into the circuit at the demonstration table an instrument which will measure the amount of current taken by the students. Provision is made for stereopticons in the assembly hall, science lecture-room and physical laboratories. One of those supplied to these laboratories is particularly adapted to the demonstration of optical phenomena.

The building is heated mainly by exhaust steam, but live steam may be used when required. The radiators automatically controlled are in two groups, (a) primary, in the heating

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 LOWER ELEMENTARY
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SCALE
 0 5 10

BASEMENT AND LOT PLAN

chambers, (b) supplementary, at the bottom of the fresh air ducts leading to each room. No direct radiation is used in the class-rooms. Fresh air is supplied by four plenum fans. Two of these fans provide for the rooms of the new building, one for the rooms of the old building, and one for the assembly hall. The heating and ventilation of the hall is independent of the rest of the system.

The entire plant is supplied with electric lights, telephones, electric bells and clocks controlled by a master clock, and a special fire-alarm system with some twenty different stations distributed throughout the old and new buildings. From each of these stations a signal can be given which will put into operation the fire drill by which all pupils pass out of the building in an orderly manner, and, if necessary, call the city fire department.*

Item 6.—The Phillips District, an elementary school. This building is located on a lot of land lying between Joy street and South Russell street. To make the best possible use of the land the building extends across the lot north and south. The thoroughfare from one street to the other is only through the building. This plan gives all the rooms sunny exposure, the morning sun on one side, the afternoon sun on the other.

There are two playgrounds on the east and two on the west and a small amount of planted space on both sides.

The basement contains the playrooms, toilets for girls and boys, the entrances and staircases and the heating apparatus.

The building contains fifteen class-rooms of the new standard size to seat 44, and 3, one on each floor, slightly larger, to seat about 50. One room on the top floor has been appropriated for use as a manual training room.

The building is compactly planned and comes within the proper limits for floor area and within the limit of 30,000 cubic feet per class-room for its cube.

Heating and Ventilation.—System. The system for steam in this building will be low pressure gravity return. The system for air will be gravity. The ventilation will be stimulated by means of aspirating coils placed in the vent flues.

Boilers.—There will be two horizontal return tubular boilers of 64 horse power each, 60 inches in diameter and 16 feet 4 inches long, containing seventy-two 3-inch tubes, 15 feet long.

Radiation.—There will be a total of 8,300 square feet of radiating surface. Class-rooms will be warmed by indirect pin radiators, generally placed in brick heating chambers in the basement. Foot-warmers encased in galvanized iron and suspended from the basement ceiling are provided for the first floor corridor. Direct radiators will be placed in the ward-robies, master's and teachers' rooms and also in the basement play-rooms and sanitarie.

* This description is furnished the Board by Dr. C. W. Parmenter, principal of the school.

Temperature Control.—The temperature of the air entering the class-rooms will be controlled by means of hand-mixing dampers, operated by the teachers.

Toilet Ventilation.—All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts and run in two separate flues to the top of the main ventilators. Connection will also be made to the space back of the urinals. Ventilation will be assisted by aspirating-coils placed in the main flues. The individual closets have similar seat vents.

Warm Air and Vent Flues.—These will be built of brick instead of galvanized iron as has been the former practice.

Electric System.—The building will be equipped with electric lights, a telephone system for interior communication, a system of electric clocks, controlled by one master clock, a system of program bells, also under control of the master clock, and a combined local and auxiliary fire-alarm system.

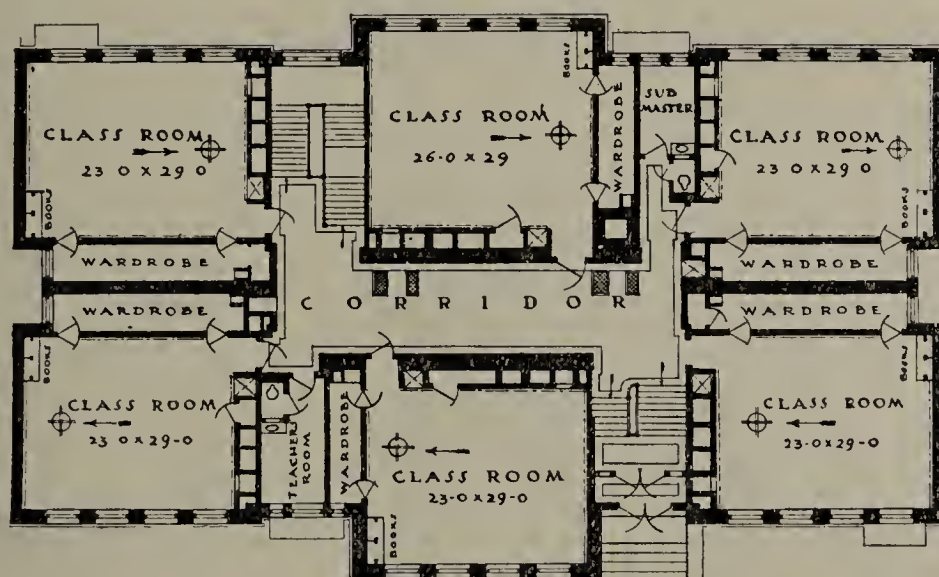
LIST OF 1908.

Item 1.—The Edward Everett District, elementary school, upper grades. This building has been described in previous reports. It is a fourteen-room upper elementary building. It contains in the basement, cooking-room, manual training room, play-rooms for boys and girls, toilets and the heating apparatus. On the first floor there are eight class-rooms. On the second floor six class-rooms and an assembly hall, occupying the central portion of the building. The class-rooms are all of the new standard size, 23 by 29, seating 44 pupils.

Heating and Ventilation.—The steam system is a combination of pump and receiver and gravity return. During the hours when the school is in session the condensation will be returned to the boiler by means of a steam pump. After school hours the fires can be banked, the steam pressure will be dropped and by means of by-pass valves the water will return directly to the boilers by gravity. Fresh air will be delivered to the class-rooms by a steel-plate plenum fan, directly connected to a steam engine operating at twenty-five pounds pressure. When the engine is running, steam for heating the building will be taken through a reducing pressure valve to the heating system, the maximum pressure being about five pounds. This will be supplemented by the exhaust steam from the engine, which will be utilized after the oil has been removed by passing through a separator. Aspirating coils, placed in the vent flues, will assist in removing the foul air from the rooms.

Boilers.—Two horizontal return tubular boilers will be installed, of 68 horse power each, 60 inches in diameter, 17 feet 4 inches long, and containing seventy-two 3-inch tubes, 16 feet long.

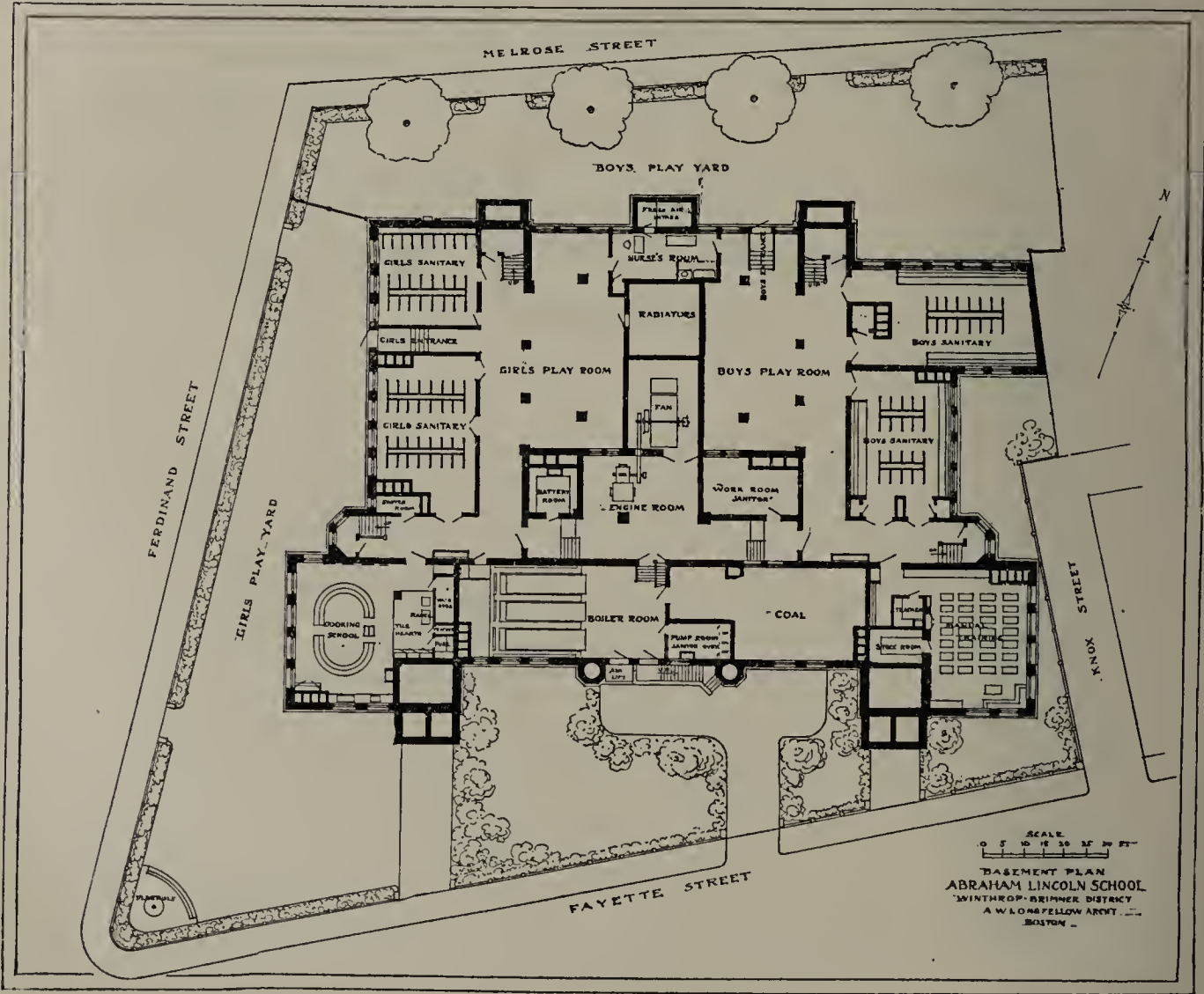
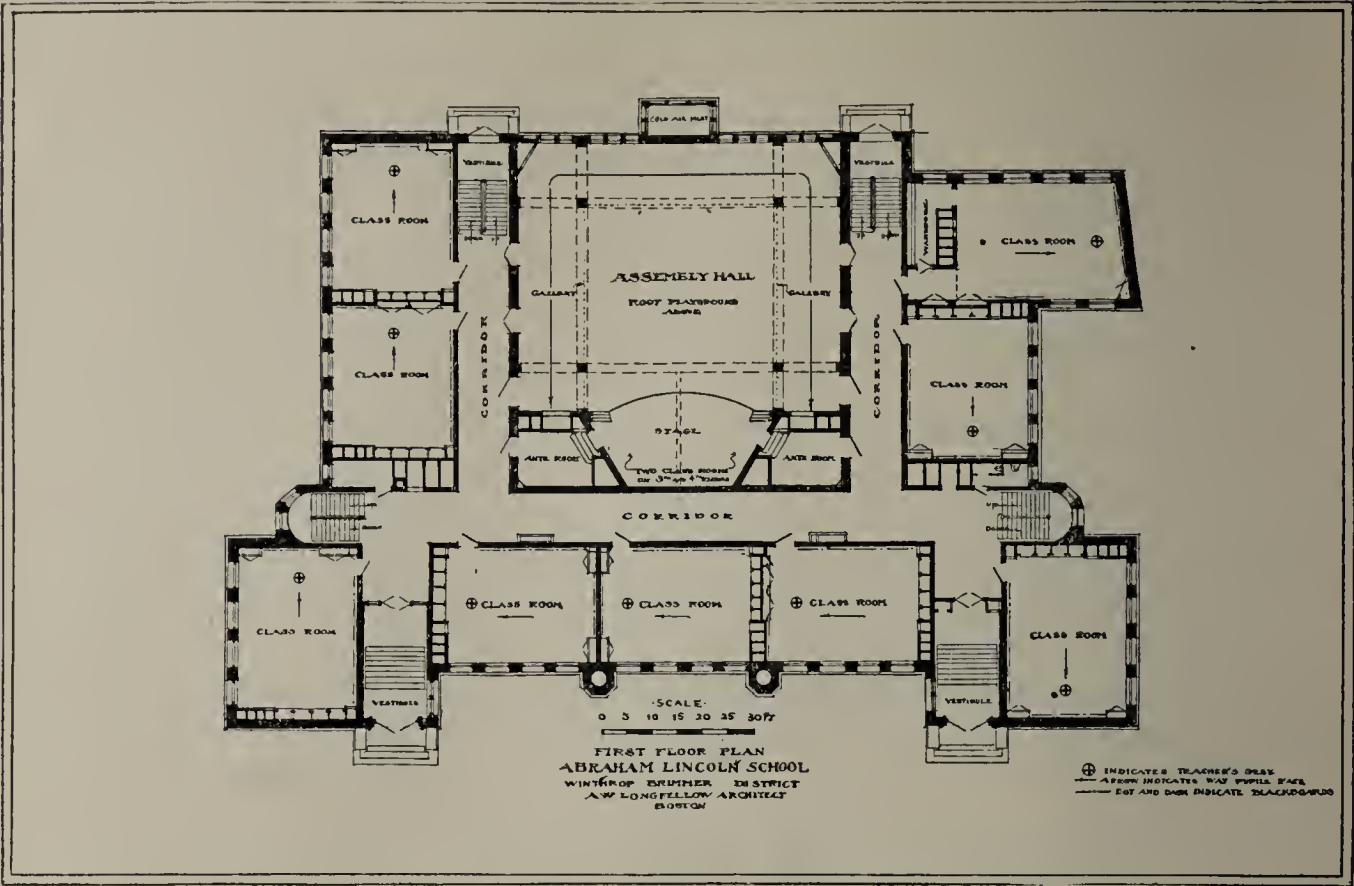
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SYMBOLS
 TEACHER'S DESK
 WAY PUPILS FACE
 BLACKBOARD
 SCALE
 0 5 10

FIRST FLOOR PLAN





Radiation.—There will be installed 7,526½ square feet of radiation, comprising indirect radiators in the main heating chamber, supplementary radiators at the base of the fresh-air risers, direct radiators in the wardrobes and small rooms, foot warmers in the first floor corridors and coils in the basement play-rooms and sanitariums.

Engine.—There will be a 12-inch by 8-inch low pressure side crank engine.

Fan.—An 8-foot, three-quarter housing, bottom horizontal discharge steel-plate fan, running at a normal speed of 105 revolutions per minute, will deliver 22,400 cubic feet of fresh air per minute to the class-rooms.

Temperature Control.—The class-rooms and assembly hall will be equipped with automatic temperature control. A thermostat placed in the main fresh-air duct and connected to mixing dampers located in the walls of the primary heating chamber will maintain the air in the duct at a constant temperature of 68 degrees Fahrenheit. Each supplementary radiator will be under the control of a thermostat located in the class-room.

Toilet Ventilation.—All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts and run in two separate flues to the top of the main ventilators. Connection will also be made to the space at the back of the urinals. Ventilation will be assisted by aspirating coils placed in the main flues. The individual closets will have similar seat vents.

Warm Air and Vent Ducts.—The horizontal fresh-air ducts in the basement will be located below the floor and will be built of concrete. The fresh air and vent risers will be of galvanized iron.

Electric System.—The building will be equipped with electric lights, a telephone system for interior communication, a system of electric clocks, controlled by one master clock, a system of program bells, also under control of the master clock, a combined local and auxiliary fire-alarm system, and a projection lantern with reflectoscope attachment for the assembly hall.

Item 2. — Brimmer District, upper elementary. The plans for this building are now completed. It is a forty-room upper elementary school, located on an irregular lot of land on Ferdinand, Melrose and Fayette streets, and it was difficult so to lay out the building as to make anything in the nature of a symmetrical plan or one that bore any very definite relation to any of the streets on which it fronted. The chief aim that the architect has had in view was so to plan the building as to give a sunny aspect to as many of the forty rooms as possible. The building contains in the basement a manual training room, a cooking-room, toilets for boys and girls, play-rooms, room for nurse, and the heating apparatus.

On the first floor the assembly hall and nine class-rooms, six

of the new standard size to accommodate forty-four, and three of larger size to accommodate fifty. On the floors above the second, which is the same as the first, that is the third and fourth floors, there are these same nine rooms and two additional ones. These two additional rooms on each floor above the second are the only rooms which have not sunlight at some time during the day. The building has four staircases.

Owing to the shape of the lot a compact floor was essential, and the recessed wardrobe, referred to elsewhere as the Chicago type, has been approved here. The clothing is hung in a recessed space at one end of the room, which is closed with accurately balanced sliding doors that lift like a sash. The recess is vented independently of the room.

One room on each floor is to be a fresh-air room, the windows arranged to open out. This is in line with modern thought in regard to children who have been exposed to tuberculosis or who have the slightest tendency in that direction. It will isolate them from others, and give them an opportunity to recover completely when such recovery is still easy.

In line with this is the establishment in the so-called Refectory Building at Franklin Park of an open-air school for children who have distinct tuberculosis tendencies. This school was opened in the autumn, and has been carried on through the winter with marked success. Undoubtedly it will lead to the permanent establishment of such a school in the country.

Heating and Ventilation.—The steam system is a combination of pump and receiver and gravity return. During the hours when the school is in session the condensation will be returned to the boiler by means of a steam pump. After school hours the fires can be banked, the steam pressure will be dropped and by means of by-pass valves the water will return directly to the boilers by gravity. Fresh air will be delivered to the class-rooms by a steel-plate plenum fan, belted to a steam engine operating at twenty-five pounds pressure. When the engine is running steam for heating the building will be taken through a reducing pressure valve to the heating system, the maximum pressure being about five pounds. This will be supplemented by the exhaust steam from the engine, which will be utilized after the oil has been removed by passing through a separator. Aspirating coils placed in the vent flues will assist in removing the foul air from the rooms.

Boilers.—Three horizontal return tubular boilers will be installed, of 98 horse power each, 66 inches in diameter, 18 feet 4 inches long, and containing ninety-eight 3-inch tubes, 17 feet long.

Radiation.—There will be installed approximately 15,541 square feet of radiation, comprising indirect radiators in the main heating chamber, wall radiators on the outside walls of the class-rooms, direct radiators in the small rooms, foot warmers in the first floor corridors and coils in the basement play-rooms and sanitariums. Special provision will be made for

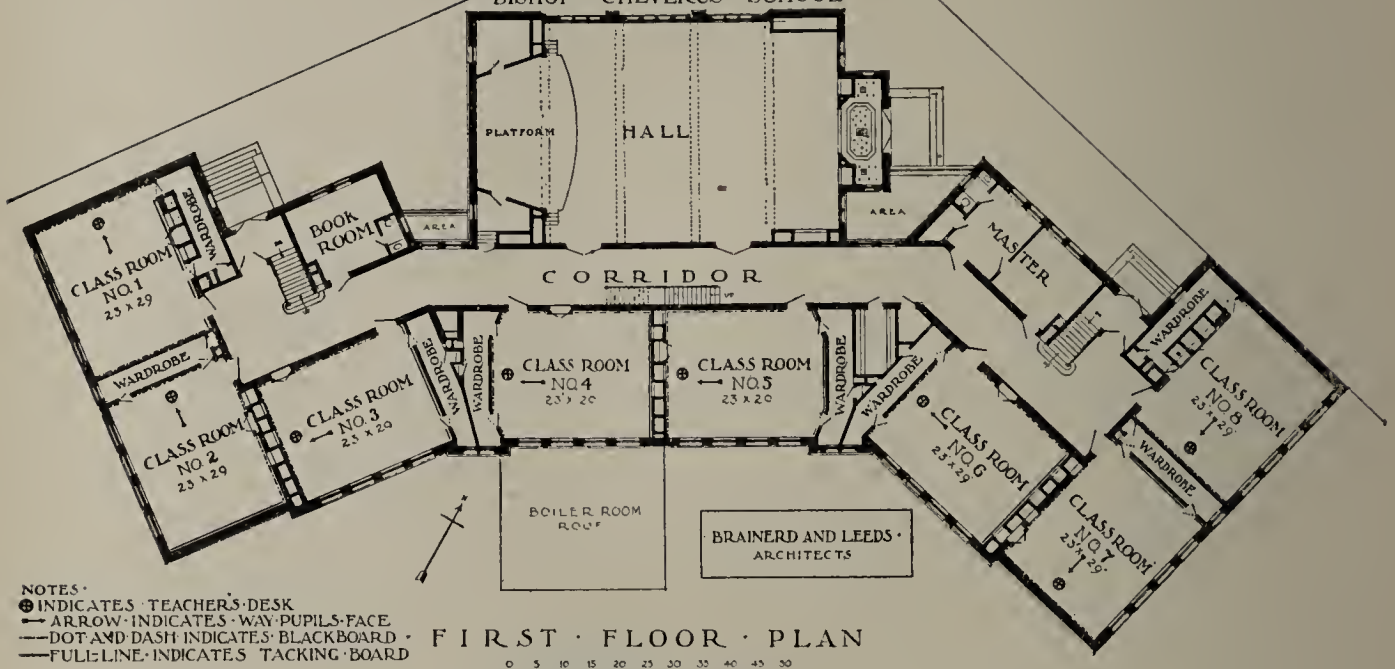


OPEN AIR SCHOOL, REFECTORY BUILDING, FRANKLIN PARK, BOSTON.

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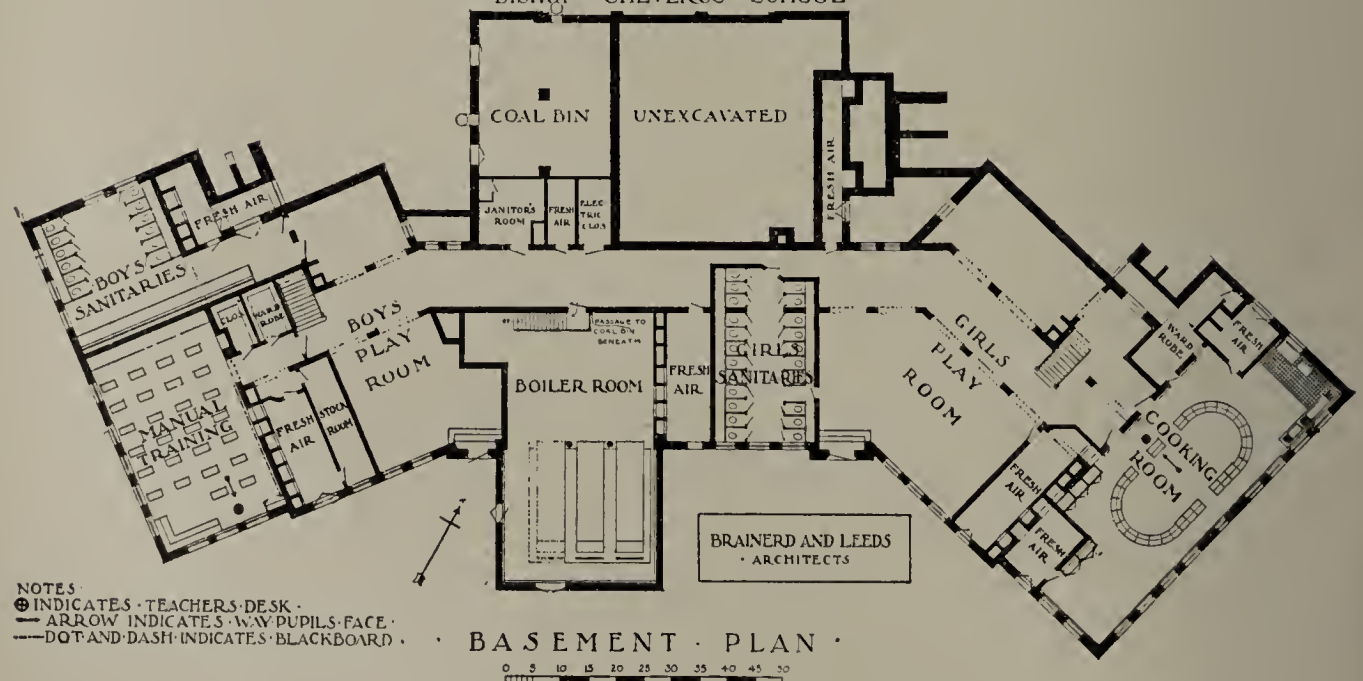
UPPER GRADE ELEMENTARY
BLACKINTON · DISTRICT · EAST · BOSTON
BISHOP · CHEVERUS · SCHOOL ·



- NOTES ·
⊙ INDICATES · TEACHER'S · DESK ·
→ ARROW · INDICATES · WAY · PUPILS · FACE ·
— · DOT · AND · DASH · INDICATES · BLACKBOARD ·
— · FULL · LINE · INDICATES · TACKING · BOARD ·

FIRST · FLOOR · PLAN

UPPER GRADE ELEMENTARY
BLACKINTON · DISTRICT · EAST · BOSTON
BISHOP · CHEVERUS · SCHOOL ·



- NOTES ·
⊙ INDICATES · TEACHER'S · DESK ·
→ ARROW · INDICATES · WAY · PUPILS · FACE ·
— · DOT · AND · DASH · INDICATES · BLACKBOARD ·

BASEMENT · PLAN ·

ventilating the wardrobes by means of galvanized-iron ducts connecting directly with the class-room vents, openings being left at the foot of the wardrobe doors.

Engine.— There will be an 18-inch by 12-inch low pressure center crank engine.

Fan.— A 12-foot, three-quarter housing, bottom horizontal discharge steel-plate fan, with special top horizontal discharge outlet, running at a normal speed of 98 revolutions, will deliver 72,000 cubic feet of fresh air per minute to the class-rooms.

Temperature Control.— The class-rooms and assembly hall will be equipped with automatic temperature control. A thermostat placed in the main fresh-air duct and connected to mixing dampers located in the walls of the primary heating chamber, will maintain the air in the ducts at a constant temperature of 68 degrees Fahrenheit. The wall radiators in each class-room will be under the control of a thermostat located in the room.

Toilet Ventilation.— All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts and run in two separate flues to the top of the main ventilators. Connection will also be made to the space at the back of the urinals. Ventilation will be assisted by aspirating coils placed in the main flues. Two motor-driven exhaust fans will be installed to supplement the coils. The individual closets will have similar seat vents.

Warm Air and Vent Ducts.— The horizontal fresh-air ducts in the basement will be located below the floor and will be built of concrete. The fresh air and vent risers will also be of the same material.

Electric System.— The building will be equipped with electric lights, a telephone system for interior communication, a system of electric clocks, controlled by one master clock, a system of program bells, also under control of the master clock, a combined local and auxiliary fire-alarm system, and a projection lantern with reflectoscope attachment for the assembly hall.

Item 4. — The Blackinton District, elementary school, upper grades. This building is located on land surrounded by four streets in East Boston, and, owing to the fact that it was a large lot, the Board felt justified in trying the experiment of an extended plan, with all the class-rooms on the first or second floor and with the assembly hall on the first floor immediately accessible from the outside without entering the building. The boilers also are located outside the line of the building. The rooms are so arranged as to give sunny exposure for all the class-rooms and, notwithstanding the extended plan, the figures prove that this building is as economical as any of its size and type that has been erected by the Board.

The basement contains the play-rooms, toilet-rooms, manual training room and cooking-room. There are eight class-rooms

and an assembly hall on the first floor and eight class-rooms on the second floor, all of the standard 23 by 29 dimensions, to seat forty-four pupils.

Heating and Ventilation.—System. The system for steam in this building will be low pressure, gravity return. The system for air will be gravity. The ventilation will be stimulated by means of aspirating coils placed in the vent flues.

Boilers.—There will be two horizontal return tubular boilers of 78 horse power each, 60 inches in diameter and 18 feet 4 inches long, containing seventy-two 3-inch tubes, 17 feet long.

Radiation.—There will be a total of 12,241 square feet of radiating surface. Class-rooms will be warmed by indirect pin radiators generally placed in brick heating chambers in the basement. Foot warmers encased in galvanized iron and suspended from the basement ceiling are provided for the first floor corridor. Direct radiators will be placed in the wardrobes, master's and teachers' rooms and also in the basement play-rooms and sanitariums.

Temperature Control.—The temperature of the air entering the class-rooms will be controlled by means of hand-mixing dampers operated by the teachers. Fresh air will be supplied to the manual training and cooking rooms in the basement by two 24-inch propeller fans belted to electric motors.

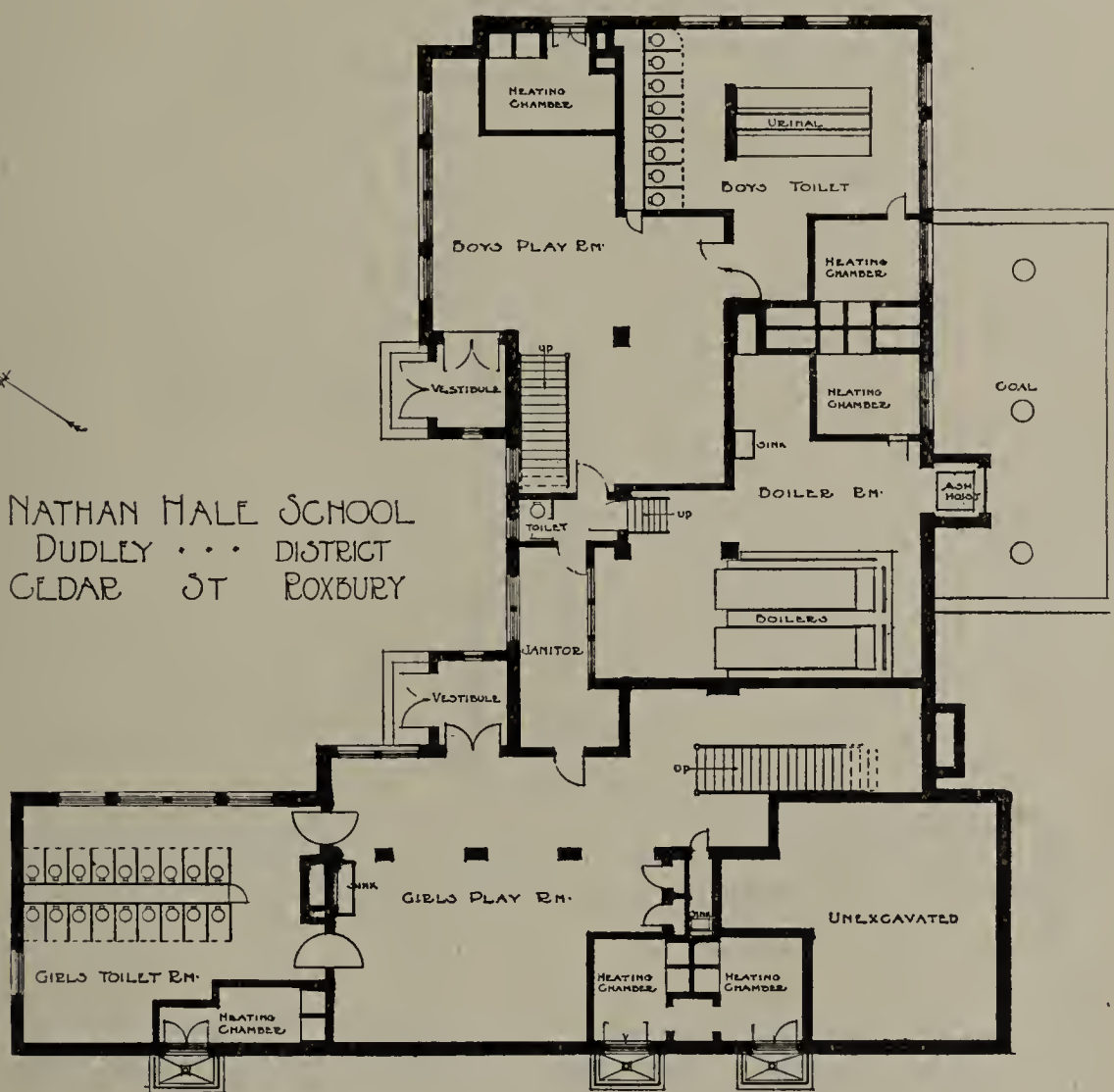
Toilet Ventilation.—All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts and run in two separate flues to the top of the main ventilators. Connection will also be made to the space back of the urinals. Ventilation will be assisted by aspirating coils placed in the main flues. The individual closets have similar seat vents.

Warm Air and Vent Flues.—These will be built of brick instead of galvanized iron as has been the former practice.

Electric System.—The building will be equipped with electric lights, a telephone system for interior communication, a system of electric clocks, controlled by one master clock, a system of program bells, also under control of the master clock, a combined local and auxiliary fire-alarm system, and a projection lantern with reflectoscope attachment for the assembly hall.

Item 5.—The Dudley District, elementary school, lower grades. This building is located on a lot of land on Cedar street. The old house which stood on this land occupied a commanding site on the top of a ledge of Roxbury conglomerate. The formation of the land and the grades were such as to suggest an L-shaped building with the class-rooms mostly on the outer perimeter. The first floor practically is at the grade of the top of the ledge, with the entrances and the playground on the inside of the L at the lower grade. This plan has worked out satisfactorily, and, notwithstanding the blasting necessary, the figures have shown that the building is an economical one. The basement contains the play-rooms, toilets and heating apparatus and

NATHAN HALE SCHOOL
 DUDLEY . . . DISTRICT
 CEDAR ST ROXBURY



PARKER THOMAS AND RICE
 ARCHITECTS
 BOSTON AND BALTIMORE

BASEMENT PLAN
 SCALE $\frac{1}{8}'' = 1'-0''$

[illegible]

PARKER THOMAS AND RICE
ARCHITECTS
BOSTON AND BALTIMORE

FIRST FLOOR PLAN
SCALE $\frac{1}{8}" = 1'-0"$

there are five rooms on the first and five on the second floor, all of the standard 23 by 29 dimension, for forty-four pupils.

Heating and Ventilation.—System. The system for steam in this building will be low pressure, gravity return. The system for air will be gravity. The ventilation will be stimulated by means of aspirating coils placed in the vent flues.

Boilers.—There will be two horizontal return tubular boilers of 51 horse power each, 54 inches in diameter and 15 feet 3 inches long, containing sixty 3-inch tubes, 14 feet long.

Radiation.—There will be a total of $6,665\frac{1}{3}$ square feet of radiating surface. Class-rooms will be warmed by indirect pin radiators, generally placed in brick heating chambers in the basement. Foot warmers, encased in galvanized iron and suspended from the basement ceiling, are provided for the first floor corridor. Direct radiators will be placed in the wardrobes, master's and teacher's rooms, and also in the basement play-rooms and sanitariums.

Temperature Control.—The temperature of the air entering the class-rooms will be controlled by means of hand-mixing dampers operated by the teachers.

Toilet Ventilation.—All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts and run in two separate flues to the top of the main ventilators. Connections will also be made to the space back of the urinals. Ventilation will be assisted by aspirating coils placed in the main flues. The individual closets have similar seat vents.

Warm Air and Vent Flues.—These will be built of brick instead of galvanized iron, as has been the former practice.

Electric System.—The building will be equipped with electric lights, a telephone system for interior communication, a system of electric clocks, controlled by one master clock, a system of program bells, also under control of the master clock, and a combined local and auxiliary fire-alarm system.

Item 6.—The addition to the Dorchester High School. This building was laid out originally for twelve class-rooms and six smaller rooms for recitation rooms. It was then increased in accommodation by making the six small rooms the same size as the others.

It is located on land immediately adjoining the present Dorchester High School lot, and will be connected with the original building by a corridor on the first floor and a similar connection in the basement. The building contains in the basement the toilets for boys and girls and the wardrobes. As the heat is supplied from the boiler plant of the old building, all the remainder of the basement is available for high school handicraft work, which includes drawing, metal and wood-working. Advantage has been taken of the slope of the land so that the rooms used for this purpose are above grade. Each floor above the basement contains six standard high school

class-rooms to accommodate thirty-six pupils each, eighteen rooms in all. Two of the rooms, however, are connected for use in connection with the commercial work of this school.

Heating and Ventilation.—The steam system is a combination of pump and receiver and gravity return, and will be so arranged as to operate in conjunction with the present heating apparatus. During the hours when the school is in session condensation will be returned to the boilers by means of the present steam pumps. After school hours the fires can be banked, the steam pressure will be dropped and by means of by-pass valves the water will return directly to the boilers by gravity. Fresh air will be delivered to the class-rooms by a steel-plate plenum fan belted to a steam engine operating at 25 pounds pressure. When the engine is running, steam for heating the building will be taken through a reducing pressure valve to the heating system, the maximum pressure being about five pounds. This will be supplemented by the exhaust steam from the engine, which will be utilized after the oil has been removed by passing through a separator. Aspirating coils placed in vent flues will assist in removing the foul air from the rooms.

Boilers.—One horizontal tubular boiler will be installed of 122 horse power, 72 inches in diameter, 19 feet 4 inches long, and containing one hundred and twenty-two 3-inch tubes, 18 feet long. There will be installed 7,447 square feet of radiation, comprising indirect radiators in the main heating chamber, wall radiators on the outside of the class-rooms, direct radiators in the small rooms, foot warmers in the first floor corridors and coils in the basement dressing-rooms and sanitariums.

Engine.—There will be a 12-inch by 8-inch low pressure centre crank engine.

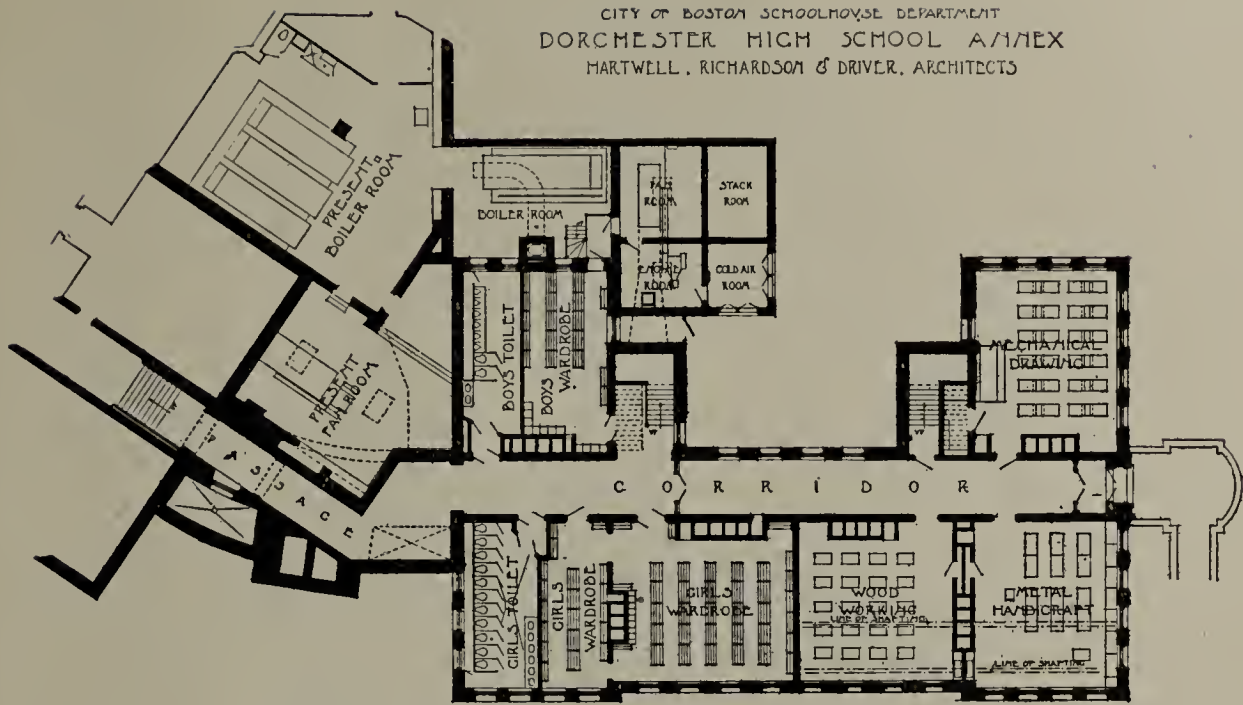
Fan.—An 8-foot, three-quarter housing, bottom horizontal discharge steel-plate fan, running at a normal speed of 125 revolutions per minute, will deliver 72,000 cubic feet of fresh air per minute to the class-rooms.

Temperature Control.—The class-rooms will be equipped with automatic temperature control. A thermostat placed in the main fresh air duct and connected to mixing dampers located in the walls of the primary heating chamber will maintain the air in the ducts at a constant temperature of 68 degrees Fahrenheit. The wall radiators in each class-room are to be under the control of a thermostat located in the room.

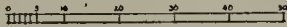
Toilet Ventilation.—All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts, and run in two separate flues to the top of the main ventilators. Connection will also be made to the space at the back of the urinals. Ventilation will be assisted by aspirating coils placed in the main flues. The individual closets have similar seat vents.

Warm Air and Vent Ducts.—The horizontal fresh-air ducts

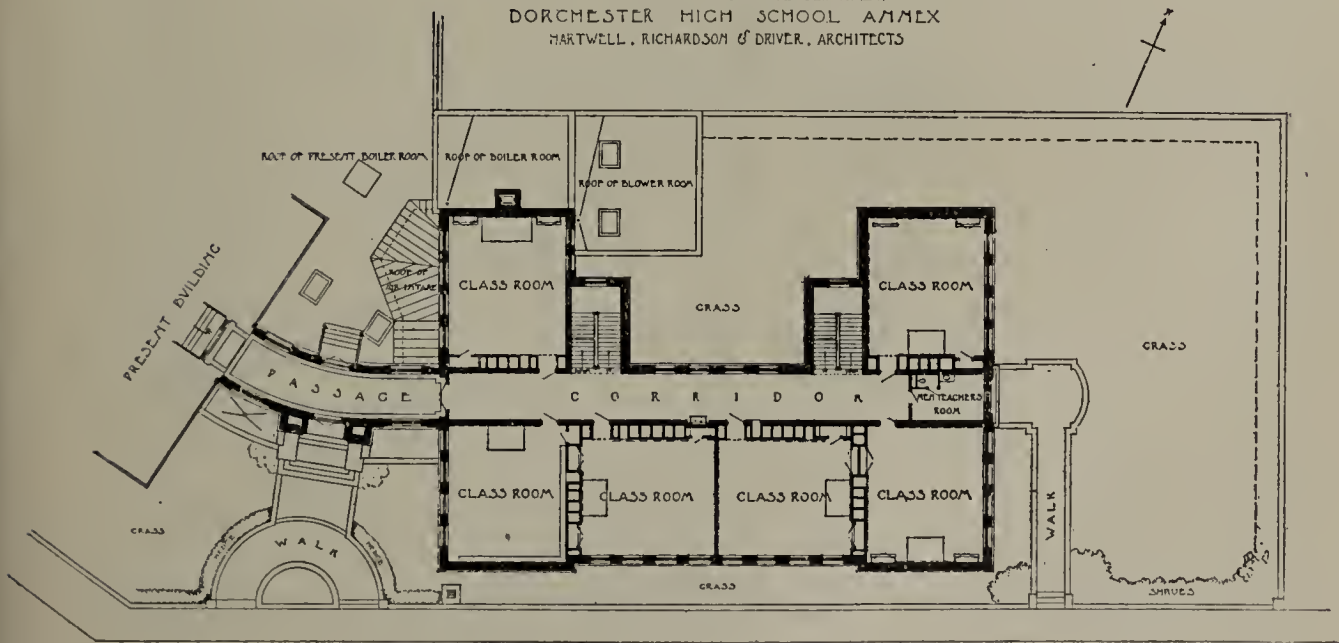
CITY OF BOSTON SCHOOLHOUSE DEPARTMENT
DORCHESTER HIGH SCHOOL ANNEX
HARTWELL, RICHARDSON & DRIVER, ARCHITECTS



BASEMENT FLOOR PLAN

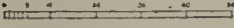


CITY OF BOSTON SCHOOLHOUSE DEPARTMENT
DORCHESTER HIGH SCHOOL ANNEX
HARTWELL, RICHARDSON & DRIVER, ARCHITECTS



LITHCOW STREET

FIRST FLOOR PLAN



LONGFELLOW - SCHOOL - EXTENSION
ROSLINDALE - MASS

C - HOWARD - WALKER - ARCHITECT



VIEW FROM CORNER OF FARQUHAR AND SOUTH STREETS

EXTENSION, LONGFELLOW SCHOOL, SOUTH AND HEWLETT STREETS, ROSLINDALE.
C. HOWARD WALKER, Architect.

in the basement will be located below the floor and will be built of concrete. The fresh air and vent risers will be of terra cotta.

Electric System.—The building will be equipped with electric lights, a telephone system for interior communication, a system of electric clocks, controlled by one master clock, a system of program bells, also under the control of the master clock, a combined local and auxiliary fire-alarm system, and motors for operating the machines in the Manual Training Department.

Item 7.—The addition to the Longfellow School, to be built upon land previously bought by this department, adjacent to the present Longfellow lot. This land is lower than the old lot, and, as we need no basement for heat, the plant being in the old building, the Board has been able to plan for a building of but two stories, having four class-rooms on the ground floor and four class-rooms on the first floor. Additional toilet accommodation for boys and girls is on the ground floor and a large teachers' room for the accommodation of the whole building is on the second floor. In the space under the pitched roof there is ample opportunity for installing in the future a cooking room when it is necessary in the district, and supplies and wastes are included so as to make the installation simple.

Heating and Ventilation.—The steam system is a combination of pump and receiver and gravity return, and will be so arranged as to operate in conjunction with the present heating apparatus. During the hours when the school is in session condensation will be returned to the boilers by the steam pumps. After school hours the fires can be banked, the steam pressure will be dropped and by means of by-pass valves the water will return directly to the boilers by gravity. Fresh air will be delivered to the class-rooms by a steel-plate plenum fan belted to a steam engine operating at 25 pounds pressure. When the engine is running, steam for heating the building will be taken through a reducing pressure valve to the heating system, the maximum pressure being about five pounds. This will be supplemented by the exhaust steam from the engine, which will be utilized after the oil has been removed, by passing through a separator. Aspirating coils placed in vent flues will assist in removing the foul air from the rooms.

Boilers.—One new horizontal tumbler boiler will be installed of 40 horse power, 48 inches in diameter, 15 feet 4 inches long, and containing fifty 3-inch tubes, 14 feet long. There will be installed 3,602 square feet of radiation, comprising indirect radiators in the main heating chamber, supplementary radiators at the base of the heat ducts to the first floor class-rooms, wall radiators on the outside walls of the second floor class-rooms, direct radiators in the corridors, wardrobes and small rooms, and coils in the sanitariums.

Engine.—There will be a 10-inch by 6-inch vertical low pressure engine.

Fan.—A 5½-foot, three-quarter housing, bottom horizontal

discharge steel-plate fan, running at a normal speed of 184 revolutions per minute, will deliver 14,050 cubic feet of fresh air per minute to the class-rooms.

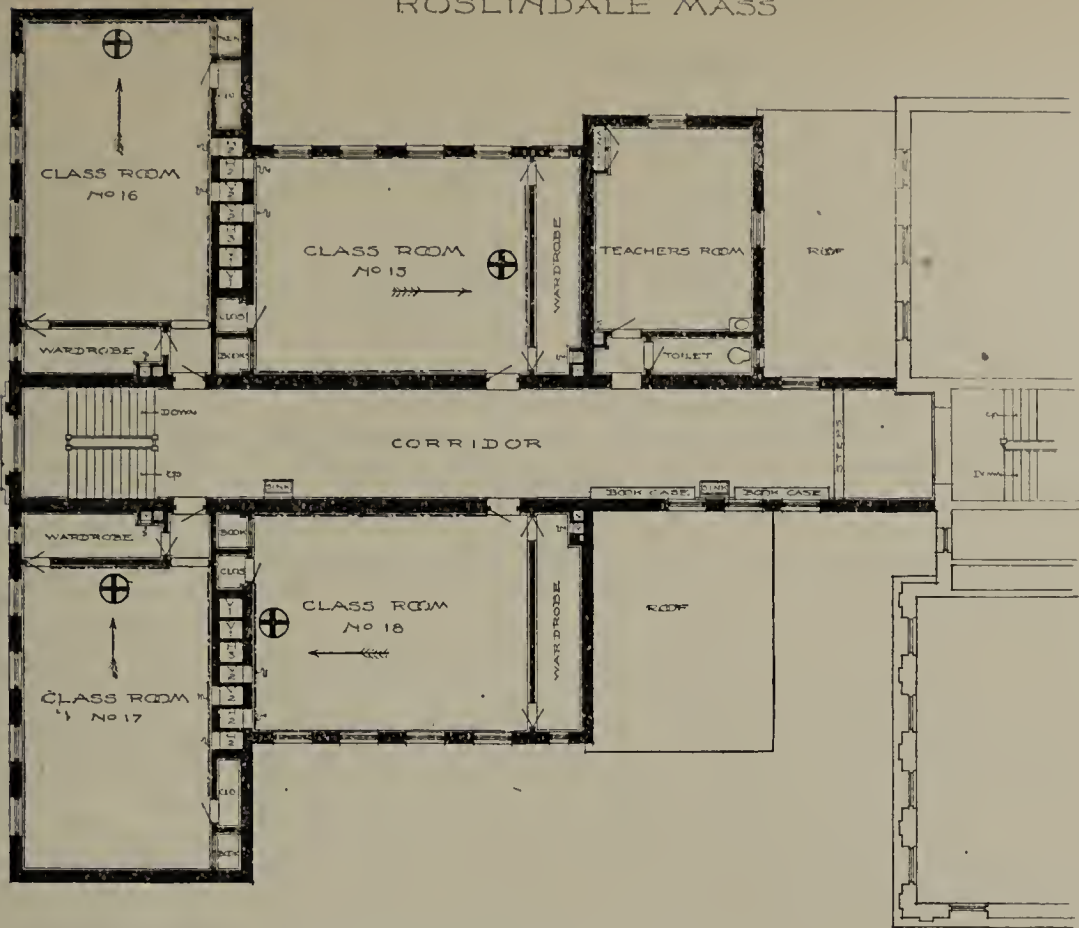
Temperature Control.— The class-rooms will be equipped with automatic temperature control. A thermostat placed in the main fresh-air duct and connected to mixing dampers located in the walls of the primary heating chamber will maintain the air in the ducts at a constant temperature of 68 degrees Fahrenheit. The wall radiators or supplementary radiators in each class-room are to be under the control of a thermostat located in the room.

Toilet Ventilation.— All water-closets in the basement sanitariums will be provided with outlets for seat ventilation, which will be connected together by means of galvanized-iron ducts and run in two separate flues to the top of the main ventilators. Connection will also be made to the space at the back of the urinals. Ventilation will be assisted by aspirating coils placed in the main flues. The individual closets will have similar seat vents.

Warm Air and Vent Ducts.— The horizontal fresh-air ducts in the basement will be located below the floor and will be built of concrete. The fresh air and vent risers will be of brick.

Electric System.—The building will be equipped with electric lights, program bells and fire-alarm system. Conduits will also be installed for the future installation of a system of electric clocks and telephones.

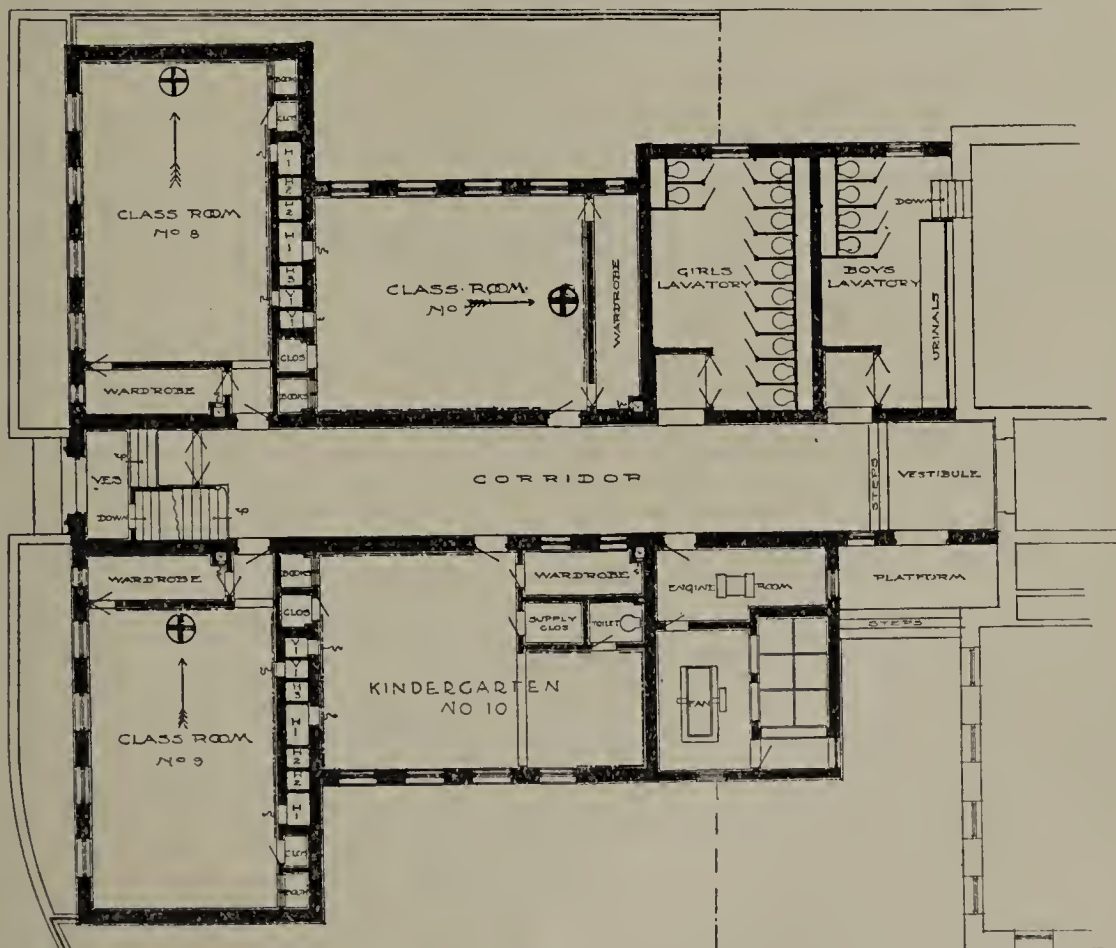
LONGFELLOW SCHOOL ROSLINDALE MASS



SECOND FLOOR PLAN

- NOTES.
- ⊕ INDICATES TEACHER'S DESK
 - ARROW INDICATES WAY PUPILS FACE
 - DOT AND DASH INDICATES BLACKBOARD

LONGFELLOW SCHOOL ROSLINDALE MASS.



FIRST FLOOR PLAN

- NOTES
- ⊕ INDICATES TEACHER'S DESK
 - ARROW INDICATES WAY PUPILS FACE
 - DOT AND DASH INDICATES BLACKBOARD

APPENDIX VII.

GENERAL INFORMATION FOR FIRST CLASS
CONSTRUCTION.

ELEMENTARY SCHOOLS.

SCHOOL-ROOMS. (1.) *Size* will be 23 by 29 for elementary grades and not less than 12 feet in clear. Modification allowable only after consultation with the Board. A building having no grades above IV., with no desk larger than 21 inches, might have rooms 22 by 28, but the standard size gives the extra space wanted for modern methods. Desks should be laid out on the preliminary plans. (See drawing.) This drawing should give 18-inch, 21-inch and 23-inch desks, laid out in a 23 by 29 room. Every class-room shall be consecutively numbered on the plans to designate it. These numbers to be for the doors, as noted below, and for the annunciator. Other rooms that appear on the annunciator to be named on the plans, as assembly hall, teachers' or master's room, cooking-room, manual training room. The Kindergarten shall be counted as a class-room. In high schools, both class and recitation rooms to be numbered, other rooms named.

(2.) *Windows* will be on the long side for left hand lighting. The glass measured inside the sash shall contain not less than $\frac{1}{5}$ of floor area, about 135 square feet for a room 23 feet wide;* neither double run of sash nor double glazing will be required, but a dust-proof metal weather strip; the head square and close to the ceiling; the sill about 2 feet 6 inches from the floor; the windows divided with muntins, no large sheets of glass. Finished with plastered jamb, no architrave, metal corner bead.

* It is evident that if this area of glass is requisite to light a room in a building with free space about it, such for example as the Sarah J. Baker School, it is inadequate for a room in a building situated like the Christopher Columbus, on a narrow street. Under exceptionally free conditions, with no obstructions to the direct light from the sky, it is possible that the area of glass might be reduced, but it appears to be no more than enough for the ordinary conditions of the new buildings, and should be increased, if possible, for such situations as that of the Columbus.

(3.) *Doors*.—One to corridor, 3 feet 6 inches by 7 feet, partly glazed, to open out, placed preferably near the teacher's end; brass-plated steel butts, 3-lever mortise lock, master-keyed; cast-brass knobs, marble thresholds to corridors. Doors to have 2-inch plain brass numbers, and cardholders $3\frac{1}{2}$ inches by 5 inches, and hooks to hold open.

(4.) *Floors* will be Georgia pine rift, or maple.

(5.) *Walls* will be painted burlap up to top of blackboards, or of tack boards, and above this plaster, tinted in water color—a warm gray green or buff gives the best results—the blackboards 4 feet high, 2 feet 2 inches from floor in kindergarten, 2 feet 4 inches to 2 feet 6 inches to Grade IV., and 2 feet 8 inches in Grades V. to VIII. Behind the teacher and on the long side. These will be of best black slate, $\frac{1}{4}$ inch thick. At end, in place of blackboard, pine sheathing with burlap stretched over it for a tack board, to extend from base to the moulding at top of blackboards. In lower grades a rack or tack board for holding cards is required above the blackboard. A picture moulding at top of burlap and also near ceiling in all rooms. (See drawings.)

(6.) *Ceilings* will be level, plaster, tinted a light cream color.

(7.) *Lights*.—Nine chain pendant electric fixtures on three switches. No gas.

(8.) *Heating and Ventilation*.—The inlet for heat about 5 square feet, the outlet for ventilation about 5 square feet.

(9.) *Bookcase*.—Provide a bookcase in any convenient position, capable of containing 300 octavo volumes; (600 volumes in bookcases for upper grades); upper doors fitted with pin tumbler locks, and latch and knob; drawers fitted with pin tumbler lock and small brass knobs. Lower doors to have pin tumbler locks; same lock in each bookcase; all bookcase locks master keyed. (See drawing.) Special equipment for care of books where school is held day and evening is described on page 20—Report, 1908.

(10.) *Map Supports*.—Provide one map support for each class-room in Grades IV., V., VI., VII., and VIII., preferably behind the teacher's desk or opposite the windows. (See drawing.)

(11.) *Teacher's Closet*.—Provide a small closet for teacher's coat and hat, preferably opening from the class-room, but allowable from the wardrobe.

WARDROBES. A (1.) *Size*.—Wardrobes will adjoin school-rooms and be from 4 feet 6 inches to 5 feet wide.

(2 and 3.) *Windows and Doors*.—Outside light, two doors, both connecting with school-room and not to corridor, and having no thresholds. Doors, double swung, 2 feet 6 inches wide, brass double acting butts, foot and hand plates, hooks or adjustable stops to hold open, ventilation under door farthest from vent.

(4.) *Floors* as in corridors, terazzo.

(5.) *Walls*.—Painted burlap up to hook rail; poles on brass-plated iron brackets with hooks under and pins over, 44 in number. Shoe rack and umbrella clip below. (See drawing.) Walls above, plaster, tinted. Height of lower pole, kindergarten, 30 inches from floor; lower grades, 36 inches to 40 inches; upper grades, 44 inches, 48 inches and 52 inches; distance between poles, 8 inches for elementary, 12 inches for high schools. Pins and hooks, 8 inches to 12 inches on centres for elementary and 16 inches to 18 inches for high.

(6.) *Ceiling*.—Plaster, tinted in water-color, light cream.

(7.) *Light*.—One lamp. Ceiling outlets, electric. Switch in class-room.

(8.) *Heating and Ventilation*.—Heating, direct. Ventilation, direct, $1\frac{2}{3}$ square feet area cross section.

WARDROBES. B The so-called Chicago type has been studied in a model for one building, but has not yet been tested in practice. It is a recess 20 inches deep and about 14 feet long, equipped with the standard pole and 44 hooks. The floor is of terazzo, the ceiling is at about 7 feet above the floor. The doors are hung like sash to slide up, are framed flush and covered with burlap for a tack-board. The ventilator is independent of the room vent, but there is no heat except what is drawn in from the room at the bottom.

CORRIDORS AND
VESTIBULES.

(1.) *Size*.— Not less than 8 feet wide for four rooms on a floor; not less than 10 feet for over four rooms, governed by length, access to stairs, etc.

(2.) *Windows*.— Outside light essential.

(3.) *Doors*.— Main outer doors to open out, heavy butts, standard, master keyed, school lock; door check; heavy hooks to hold open. Vestibule doors open out, heavy butts, bulls, push plates, hooks to hold open, door checks, no locks. Outer doors to basement open out, and fitted with standard latch lock. Other hardware as above.

(4.) *Floors*.— Terazzo or granolithic, or linoleum glued on a cement surface.

(5 and 6.) *Walls and Ceilings*.— Painted burlap, 7 feet high, or a light glazed brick, untinted walls and ceilings. Finish burlap with a dado cap, and put picture moulding at ceiling in corridors.

(7.) *Light*.— Ceiling or short pendant fixtures (electric) 32 candle-power each, also gas for emergency in corridors, on stairs and in vestibules.

(8.) *Heating and Ventilation*.— Heat, direct, supplemented by foot warmers on first floor. Ventilation where possible.

(9.) *Sinks and Closets*.— On each floor above the first one or two 4-foot sinks, and emergency closets, with water-closet and bowl, with hot and cold water, one for boys and one for girls.

STAIRCASES.

(1.) *Number and Arrangement*.— Determined by the Board, but fireproof construction in all cases, and not over five feet wide.

(2.) *Material*.— The treads, North River stone on iron string, or concrete construction with granolithic surface. Rails of a simple pattern, easily cleaned; wall rails not necessary.*

(3.) *Steps*.— About $6\frac{1}{2}$ or 7 inches by 10. Rail not less than 2 feet 8 inches on runs and 3 feet on landings.

SANITARIES.

(1.) *Size*.— General toilet-rooms in basement, in size approximating space for 2.25 water-closets for each school-room, .75 boys, 1.5 girls, and 33 inches of urinal for every school-room, arranged for convenient super-

* In many schools the children are required to file in the centre of the stairs and to keep away from the walls. Where this is the rule a rail on the wall appears needless.

vision and circulation.* Slate sinks, length from 10 inches per class-room in small buildings to 6 inches per class-room in large buildings, located preferably in the play-rooms. The above refers to mixed schools.

(2.) *Windows.*—Ample outside light; glazed where exposed to view outside with factory ribbed glass.

(3.) *Doors.*—The doors arranged “in” and “out,” with spring or door check and stout brass hooks to hold open; glazed with ribbed glass; half doors to water-closets except where ordered omitted.

(4.) *Floors.*—Asphalt. Boys’ drained to urinal, girls’ to floor wash.

(5.) *Walls.*—Salt-glazed brick, or other nonporous, inexpensive surface, 7 feet high; above, brick painted.

(6.) *Ceiling.*—Untinted plaster or whitewashed concrete. No basement ceiling need be furred level

(7.) *Light.*—Ceiling or short pendant electric fixtures.

(8.) *Heat and Ventilation.*—Heat direct. Ventilation through water-closets and space back of urinals, allow 10 square inches local vent for each water-closet and 8 square inches for each lineal foot of urinal.

MASTERS’S AND TEACHERS’ ROOMS.

(1.) In each school of the upper grades a room of about 240 square feet for the master, with a water-closet and bowl and a book-closet adjoining. This room should be near the centre of the building, *i.e.*, on the second floor in a three story building. In all schools a room or rooms for teachers, averaging about 300 square feet for ten teachers, with one water-closet and bowl for each ten.

(2.) Where men as well as women are teachers, a separate room with toilet accommodations for men.

(3.) Opportunity in teachers’ rooms for warming luncheon, either gas or electric.

PLAY-ROOMS.

(1.) All free basement space to be arranged as play-rooms for boys and girls. Salt-glazed brick, 7 feet high, and painted or whitewashed brick or stone walls above. Granolithic floors drained to floor washes, plaster ceilings or whitewashed concrete.

* Inquiries have been addressed to principals of all schools where water-closets and urinals have been installed on this basis, and the consensus of opinion appears to be that the number cannot be reduced without inconvenience, but that it is satisfactory as it stands.

PLUMBING FIX-
TURES.

(1.) *Water-closets*.—The basement water-closets for elementary schools are short hopper closets; elsewhere, a heavy washdown closet, (See drawing.)

(2.) *Slate partitions*.—Any sound, close-grained slate, black, green or purple, supported at ends with iron pipe about 8 feet high, tied together and to the wall, to which doors are hung. (See drawing.)

(3.) *Urinals*.—The urinals will be of slate, floor slab, trough and back, without partitions,* flushed automatically, through $\frac{7}{8}$ -inch perforated pipe, with cold water; vented at bottom into space behind. (See drawing.)

(4.) *Sinks* of black slate, self-closing cocks, set 15 inches on centres, and cup-hooks at each side of cocks, and jet drinking fountains in the external angles.

(5.) *Floor Washes* in sanitariums and play-rooms as already mentioned. (See drawing.)

(6.) *Piping*.—(a.) Cast iron must be laid on good footing in basement, cleanouts at every change of direction. Soils and vents exposed as far as possible, no asphaltum, but oil-tested, red lead and three coats of paint.

(b.) *Supplies*.—Exposed as far as possible; where covered may be plain brass, elsewhere polished brass; no nickel-plate. Hot water for janitor's use in basement, cooking-room, and for master's and teachers' rooms and emergency toilets. Supply from boiler and from summer boiler, if any, or from an independent hot-water heater.

(c.) *Fire Lines*.—In buildings over three stories high, one or more lines of 3-inch pipe if requested by the Board.

SPECIAL ROOMS.

ASSEMBLY
HALLS.

(1.) Assembly halls should accommodate from 400 to 800. It is not considered necessary to seat the full number of pupils in schools of greater capacity. The floor to be level and of wood like class-rooms. The windows to be fitted with rebated mouldings to take black shades, and so designed as to make the operation of shades practical and simple. The platform should be capable of accommodating one, or in the large schools, two classes and should have removable stepped platforms of

* The Board is considering and experimenting with a partition to give partial privacy, and yet avoid the difficulties with the partition that goes to the floor.

wood to take the benches. Galleries may be used where the hall is two stories in height. Anterooms near the platform are desirable, and a connection from adjoining class-rooms to the anterooms or directly to the platform. A dignified architectural treatment of the walls and a studied color scheme for walls and ceiling is expected. The lighting, acoustics and exits should be such as belong to a small lecture hall. Artificial lighting to be under control from at least two points, one of which must be near an exit. Electric outlet for 30 ampere projection lantern, 25 feet from curtain. Provide recess in ceiling over platform for spring rolled curtain 13 feet long.

MANUAL
TRAINING
ROOMS.

(1.) *Size*.—Room, generally located in basement, should be approximately 900–1,000 square feet, preferably a corner room; and arrangement, shown by drawing, for number of benches there given 28.

(2.) *Light*.—The windows should be as near full length as possible, and on two sides. Artificial light in chain pendant electric fixtures, one light to every four benches.

(3.) *Floors*.—Of wood.

(4.) *Walls*.—A basement room should be finished as a shop; salt-glazed brick up to 7 feet where exposed, and above blackboard space of about 15 running feet, 4 feet high, and above this brick walls whitewashed. If above basement, finished as a class-room.

(5.) *Ceilings*.—Like basement.

(6.) *Heating and Ventilation*.—The same as in class-rooms.

(7.) *Fittings*.—(a.) *Stock-room*.—Stock-room should contain at least 80 square feet, preferably long and narrow. Eighteen-inch shelves should run around the room, 5 feet 6 inches and 6 feet from the floor.

(b.) *Wardrobes*.—Wall space for 30 double coat and hat hooks, in a separate room.

(c.) *Teachers' Closet*.—Teachers' closet should be large enough to be used also for storage of finished work, and should be fitted with all shelving possible as well as with the customary coat hooks. An area of 40 square feet is adequate.

(d.) *Bookcases*.—Like those in class-rooms, 150 capacity.

(e.) *Work-rack*.—About 28 feet long, 6 feet 6 inches high, and 2 feet deep. The length

is to take 27 compartments (equalling the number of benches) and the height the number of divisions that use the room (two each day, five days, outside limit). (For all of these see drawings.)

(f.) *Sink*.—A 3-foot porcelain enameled iron sink, with hot and cold water.

(g.) *Furniture*.—(Not included in the building contract.) The furniture comprises 28 benches and stools, 4 display frames about 6 feet long and 30 inches wide, demonstration steps and guard rail, teacher's desk, table 4 feet by $2\frac{1}{2}$ feet with unfinished top, one desk chair and two common chairs. (See drawing. Lay these out on preliminary drawings.)

COOKING-ROOM.

(1.) *Size*.—Should have an area of 900–1,000 square feet, preferably a corner room on top floor but generally in basement, and arranged for 28 stations.

(2.) *Light*.—Windows as in a class-room, if located in a corner, from two sides. Artificial light as in a class-room.

(3.) *Walls*.—Above basement, similar to school-rooms, blackboards, 4 by 10 feet, back of teacher's desk. Walls painted in oils. A basement room may have salt-glazed brick walls up to 7 feet and painted brick above. (See drawings.)

(4.) *Floors*.—The floor linoleum, on cement, except space occupied by ranges, which is tiled.

(5.) *Ceilings*.—Ceilings like basement, or if above basement like class-rooms.

(6.) *Heat and Ventilation*.—Less heat is required than in a class-room, but the ventilation should be the same, with additional vent from the demonstration ranges.

(7.) *Fittings*.—(a.) *Wardrobes*.—Provision for 28 pupils, double coat and hat hooks in separate lighted closet, and small teacher's closet.

(b.) *Work benches*, accommodating 28 pupils, fitted with compartment for utensils, bread-board, etc., a Bunsen burner with a hinged iron grill over it, set on aluminum plates at each station; benches arranged in the form of ellipse, or oblong, with access to centre from two sides; top of pine 26 inches wide; open underneath and supported on pipe standards. One section detached and fitted as a demonstration bench; a clear space of 4 feet all around. Dining table (furnished under another

contract) is to be set in centre. (See drawings. Lay these out on preliminary drawings and include in final drawings and contract.)

(c.) *Dresser*.—Ten feet long, in 3 sections, 4 adjustable shelves and glazed sliding, or hinged, doors at top; one set of 3 drawers and 2 cupboards on lower part. A shelf should be put in each cupboard about 12 inches from top.

(d.) *Fuel-box*.—In 2 compartments, each about 24 inches square and 30 inches deep, with hinged lids; small shelf in one section. Accommodations in the main coal-room for a supply of range coal and kindling wood.

(e.) *Bookcase*.—Similar to those provided in class-room.

(f.) *Sink*.—Soapstone, 5 feet long; 2 cold and 2 hot-water cocks; soapstone drip shelves 24 inches long at each end of sink, and a small sink about 2 feet long with 1 hot and 1 cold water cock. Sinks should be near ranges.

(g.) *Hot-water Supply*.—(See instructions in plumbing.)

(h.) *Coal and Gas Ranges*.—A six-hole coal range and a similar gas range with hood provided and set on a hearth previously mentioned.

(i.) *Refrigerator*.—Will be a part of the furniture. Furnished under another contract.

KINDERGARTEN.

(1.) *Size*.—The rooms can be contained in the space of a class-room and wardrobe, but a slightly larger area, 800 to 900 square feet, is desirable. They comprise a large room, a small room, a supply closet, a wardrobe and a water-closet. The large room should take a 16-foot circle, regulation lines painted on the floor, with at least 4 feet all around it. The small room, about 200 square feet.

(2.) *Light*.—Windows should be as in a class-room, if on a corner, on both sides. Exposure should be sunny. Artificial light of the class-room type, arranged for the different rooms.

(3.) *Doors*.—Door to corridor as in class-rooms. Wide doors should open from small room into large room.

(4.) *Floors*.—Linoleum, cemented on to concrete surface, with painted lines as above.

(5.) *Walls*.—As in class-rooms, with black-board as in lower grades.

(6.) *Ceilings*.—As in class-rooms.

(7.) *Heat and Ventilation*.—As in class-rooms.

(8.) *Fittings*.—(a.) *Wardrobe*.—Hooks for 60, arranged as in ordinary wardrobes.

(b.) *Teachers' Closet*.—For clothing of two or three teachers.

(c.) *Toilet-room*.—Immediately adjoining, with low-down seat and bowl or sink.

(d.) *Bookcase*.—As in lower grades.

NURSE'S ROOM. (1.) *Size*.—From 200 to 400 square feet, according to size of school.

(2.) *Windows*.—Outside light as in class-rooms.

(3.) *Shades*.—Set to roll from window-sill upward. Not in building contract.

(4.) *Doors*.—One door to corridor, as in class-rooms, marked "Nurse's room."

(5.) *Walls*.—Upper two-thirds plaster, smooth finish, round corners, painted with light green oil paint. Lower one-third to floor, glazed white tile.

(6.) *Floor*.—Terazzo, like corridors.

(7.) *Heat and Ventilation*.—As in class-rooms.

(8.) *Light*.—Pendant electrolier with special shade. Extra socket on body of fixture for hand portable.

(9.) *Nurse's Closet for Supplies*.—Size 3 by 4; one shelf; 6 hooks for clothing.

(10.) *Bath Tub*.—Five-foot porcelain enamelled iron, hot and cold water, where requested by Superintendent of Nurses.

(11.) *Bowl*.—Porcelain, hot and cold water faucets to turn by foot pressure, *i.e.*, hospital pattern. Hot water must be available all the year.

(12.) *Stove and Clock*.—Gas or electric heater as in teachers' rooms, and a secondary clock.

(13.) • *Fittings*.—(Not in building contract.)

(a.) *Cabinet*.—Oak finish, medical cabinet, adopted as standard by Schoolhouse Commission. (b.) *Stool*.—White enamel revolving stool. (Not in building contract.) (c.) *Table*.

—Dressing table, white enamel frame, glass top and shelf. Size 16 by 20, rubber crutch tips. (d.) *Filing Case for Nurse's Records*.—Oak finish, to hold 1,000 cards, 4 by 6; lock and key; guide cards. (e.) *Writing Table*.—Oak finish with drawer and lock; size, 20 by 30.

(f.) *Chair*.—Oak, to match table. (g.) *Couch*.—Flat frame oak, canvas adjustable top. (h.) *Mirror*.—Size $2\frac{1}{2}$ by 3, set over bowl.

HIGH SCHOOLS.

CLASS-ROOMS
AND RECITA-
TION-ROOMS.

(1.) High school class-rooms are laid out for classes of thirty-six or forty-two, generally the latter. A room, 26 feet by 32 feet, will accommodate forty-two high school desks. The larger class-rooms are to accommodate from sixty to eighty pupils; the larger number can be accommodated in a room 33 feet 8 inches by 43 feet. Recitation-rooms, which to a certain extent will be used also as class-rooms, should be about 16 by 26. These rooms, if equipped with continuous desks and seats as in a lecture-room, or with double desks, such as are to be used in the Charlestown High, would accommodate about thirty pupils each. Lay out desks in one room of each type on preliminary plans.

ASSEMBLY HALL. (1.) For a high school would not differ materially from that already described for elementary schools.

MASTERS' AND
TEACHERS'
ROOMS.

(1.) For accommodation of the principal there should be an outer office, that is, a waiting-room or reception-room, and an inner office; and rooms for both men and women teachers, which might well be concentrated in the neighborhood of the reception-room and the principal's room. The School Committee now have under consideration a change in the organization of high school teachers, which may require a modification of the arrangement of the offices.

CHEMISTRY.

(1.) *The Rooms in General Required*.—Laboratory, separate from lecture-room, may be used as recitation-room, but better to use lecture-room and keep laboratory free from desks and demonstration table. Lecture-room, separate from laboratory, but easy of access, may be used for recitation; in that case should have facilities for demonstration. Combined lecture-room for physics and chemistry admissible. Three rooms for administrative purposes, store-room for dry chemicals and apparatus, room for storage of liquid chemicals and preparation of re-agents, which may also be used as a teacher's laboratory and an office. The total

CHEMICAL
LABORATORY.

area of the laboratory and administration rooms should be about 1,200 square feet, and of the lecture room about 600 square feet.

(1.) *Size*.—Should accommodate a class of forty to fifty pupils, with apparatus. Accommodation for three such classes.

(2.) *Light*.—On two sides.

(3.) *Heating and Ventilation*.—On same basis as for class-rooms, but removal of gases should also be provided for by a hood, each compartment of which should be ventilated by 9-inch hole at top, venting into elbow or T of drain pipe, thence connected by drain pipe into main flue, in which should be a fan operated by a motor.

(4.) *Walls and Ceiling*.—Walls of brick ideal, but not generally feasible, except on outside walls; plaster walls painted in oils and ceiling of plaster, covered with water-resisting surface containing no lead. All woodwork to have natural finish, except tops of desks.

(5.) *Floor*.—Preferably of concrete; may be of hardwood in narrow strips, filled in by asphalt; should slope very slightly between desks, interspaces again trending to common corner, which may be drained.

(6.) *Equipment*.—Working desks at right angles to greater length of room, in sections back to back between windows; sections movable when top is removed. Each section 21 feet to 24 feet 6 inches long, 2 feet wide, 3 feet to 3 feet 2 inches in height. Distance between double sections about 5 feet, same distance at least between ends of sections and hood, which should be opposite longer line of windows and at right angles to direction of desk sections. Other ends of sections near enough to wall to allow for drain at right angles to sections and under windows. Desks to be of ash or any durable wood, natural finish. Top of narrow pine strips, treated with aniline black and waterproof lead finish. Individual desks provided with 3 lockers and 3 sets of drawers each, each set of drawers operated by bar from locker, combination lock to fasten locker. Each double section of desks provided with soapstone sink, placed between sections and flush with section top, which should slope slightly to sink.* Sink 8 inches at least wide,

* Individual sinks are preferred by the teachers, although the long trough is apparently adequate for teaching elementary chemistry, and is less expensive.

and should begin within 1 foot of the end toward hood, depth here to be 6 inches, running nearly to other end, where depth should be 8 inches. Each pupil to have working space of 3 feet 6 inches by 1 foot 8 inches. Each double section of desks provided with shelf for re-agents, running length of desk, 10 inches to 12 inches above desk, supported by metal standards at suitable intervals, of white wood, $1\frac{1}{4}$ inches thick, 9 inches wide, natural finish, covered with glass plates, $\frac{1}{4}$ inch thick, 9 inches wide, suitable lengths, clamped to wooden shelf with as few clamps as possible. Wooden shelf at free end of each section, 1 inch to $1\frac{1}{2}$ inches thick, 3 feet to 4 feet long, not over 1 foot 3 inches wide, height of 2 feet 8 inches to 2 feet 10 inches, for holding blast lamps, re-agent jars, etc. Finish off top of shelf in aniline black. Floor space under second row of windows taken up with line of extra desks, built like sections, furnished in similar way, but without necessarily a drain, to be used for emergency or general utility. Wall space not otherwise occupied may be used for shelves or cabinets. Fixed slate blackboards at end opposite second set of windows and parallel to desk sections, sliding slate blackboards above hood. Liquid waste may be thrown into desk sink, dry waste into earthen jars. Hood should run at right angles to desk sections and along wall opposite free ends of sections. In the construction of hood, protection against fire should be considered. Should be built against brick wall. Floor of hoods to be of slate; wood, inside and outside, to be finished natural. Space divided into 3 or 4 compartments, closed by sliding windows, Space against wall not occupied by hood for general sink.

(7.) *Gas*.—Lead from gas main at free end of centre of double desk sections, branch into 2 leads along back of each section. Take-offs between each working desk space in form of pillar with two $\frac{1}{4}$ -inch cocks, at each end desk a single cock. Two $\frac{1}{4}$ -inch gas nipples at each side of each compartment of hood. Cocks of these outside of hood. Wall desk fitted with single gas taps at intervals of 2 feet.

(8.) *Water*.—Lead from water main at free end of centre of double desk sections. Size, large enough to fill section sink rapidly.

Lead of ordinary size along length of section underside of shelf, take-off at free end of section, to which blast and suction pump may be attached. At junction of each four working desk spaces take-off, carrying two valves with hose bibb delivery $\frac{1}{4}$ -inch, the two valves or cocks facing opposite sides. Suction pump attached to these bibbs if desired

(9.) *Drains.*—Section desk sink to have open drain and mercury arrestor, into which should be set movable concave netting of wide mesh to arrest larger solid matter. Main desk drain at right angles to sections along and under windows, between windows and sections should be in form of wooden trough, in sections dovetailed from 6 inches to 8 inches inside diameter and equally deep, covered with asphalt paint or filling; may be supported on brackets against wall and left open, or covered and provided with movable top. Into this drain will drip the lead pipes coming from section sink. Slate floor of each hood compartment should deepen slightly in centre, where there should be a hole 1 inch in diameter, into which is fitted short lead drain pipe, closed by perforated plug; drain pipes to be connected with sloping drain pipe, open or closed, running toward and delivering into general sink.

(10.) *Electricity.*—Current of electricity on section desks need not exceed ten volts, may be supplied from source common to physical and chemical side. Plugs between each working space placed under desk top on frame.

LECTURE AND
RECITATION
ROOM.

(1.) *Size.*—Area to depend on number of seatings required or number of pupils in classes; should be large enough for two classes and should occupy a position between the laboratories for physics and chemistry.

(2.) *Light.*—As much glass area as classroom, preferably from left. Fit windows and other openings admitting light with dark curtains as specified under Assembly Hall. Electric lighting from the top, controlled at point convenient to demonstration table.

(3.) *Floor* stepped up in fireproof construction and finished in wood like floor.

(4.) *Heating and Ventilation.*—As for class-rooms, with extra ventilation to remove fumes. Space at left end of desk provided with register and flue of at least 10 inches diameter, to afford means of down draught.

Flue carried under floor to nearest wall, flue and draught actuated by motor, if not sufficient.

(5.) *Equipment.*— Demonstration table, not less than 12 feet long, not more than 3 feet, nor less than 30 inches wide, height 32 inches. Placed 4 feet distant from wall, material same as that of room, top made of pine plank and finished like chemical laboratory desks. Pneumatic sink at right hand of desk, of soapstone in 2 depths. Not to exceed 30 inches long, 20 inches wide. Depth, 4 inches to 6 inches minimum; 16 inches to 18 inches maximum. Length of minimum depth not to exceed 60 per cent. of total length. Sink to be depressed in table and provided with flush cover. Sink to have screened drain with mercury trap and overflow. Supply hot and cold water under reduced pressure and cold water under street pressure for quick filling, 2 goosenecks with $\frac{3}{4}$ -inch hose bibbs, to one of which combined blast and suction pump may be attached; steam supply direct from boiler main with a by-pass to summer boiler; supply gas air suction, and gas taps not exceeding 6 in number. Over demonstration table, secured to ceiling, provide a plank with heavy screw hooks. Behind lecture table provide sliding blackboards of not less than 50 square feet, and a canvas curtain on heavy spring roller for attaching charts. Drawers and closets for lesser lecture apparatus and chemicals in body of table, wall on either side provided with shelves for re-agent bottles under glass, and side wall provided with cabinets for larger pieces of permanent apparatus, if there is no special room for this. Lifting seats with desk for taking notes arranged on platforms, so that the successive tiers will rise one above the other to insure an unobstructed view of demonstration table. (See drawing.)

(6.) *Electricity.*— Provide three (3) forms of current, viz., one circuit for direct current at 110 volts, 30 amperes, and one circuit for 5 to 20 volts, 50 amperes, and one circuit for alternating current at 110 volts, 30 amperes. Regulating rheostat for the 5 to 20 volt direct current to be located conveniently to table. A 50-ampere ammeter and a 125-volt voltmeter, both with extra large illuminated dials,

mounted on swing brackets in full view of class and instructor; suitable means for switching ammeter and voltmeter to either circuit. Terminate circuits in nonreversible push plug receptacles. A projection lantern and receptacles for same at end of table and at rear of room. Lantern screen on spring roller at side of room, width of screen usually 12 feet, but dependent on distance and lenses used.

ADMINISTRATIVE
FACILITIES.

(1.) *Apparatus Storeroom*.—Should give ample space for storage of extra and reserve apparatus and original packages of stock chemicals. These should be kept in dust-proof cabinets with glass doors and in drawers.

(2.) *Preparation Room*.—This should adjoin the above. Primarily for storage of liquid chemicals in bulk and preparation of liquid re-agents, and storage of supply bottles, also fitted for teacher's laboratory. Should have wide centre table with gas in centre, working desks, with drawers and closets along two sides, also gas, water, sink, blast, suction, steam and electricity. Shelves along desks for storage of liquid chemicals, supply bottles and smaller re-agent bottles. An adequate hood should be provided.

(3.) *Office and Balance Room*.—Adjoining storeroom and preparation-room should be small room to contain desk, book shelves, table and a good grade balance.

PHYSICAL
LABORATORY.

(1.) *Size*.—In a space about 30 by 40 feet. A laboratory, apparatus-room, and shop.

(2.) *Light*.—The same basis as for classrooms, one wall having as direct a southern exposure as possible for *porte lumiere* studies. Artificial light, as in a class-room. Dark curtains in addition to regular shades for darkening room. Windows and all openings admitting light fitted as specified under Assembly Hall (p. 88).

(3.) *Heating and Ventilation*.—On same general basis as for class-rooms.

(4.) *Equipment*.—Small laboratory tables to accommodate two or four pupils at each, built of hard wood, white pine tops, fitted with 4 drawers, supports and adjustable cross-bar. Wall tables around room on sides where there are windows, with one or two shallow drawers under, but not deep enough to interfere with comfort of pupil. Soapstone drip sinks with cold water to be provided at these tables, one

to every six or eight pupils. Instructor's table, fitted with hot and cold water, Richards' pump, numerous cupboards and drawers of various depths and widths. Two-inch plank bolted to ceiling over this table, with space of 2 or 3 inches between plank and ceiling for attachment of pendulums and other apparatus. Provide electric outlet for stereopticon and screen for same.

(5.) *Furniture*.— Provide adjustable stools for all the tables and a sufficient number of tablet arm chairs to accommodate the entire division during demonstration exercises. Chairs to be placed in rectangle formed by pupils' tables and demonstration table. These are not in building contract, but to be laid out on preliminary plans.

(6.) *Electricity*.— One outlet for direct current at 110 volts E. M. F. and 30-ampere capacity. One outlet for direct current at low voltage with regulator conveniently located. One outlet for alternating current at 110 volts E. M. F. and 30-ampere capacity. One outlet for each kind of current at demonstration table, to be single pole push plugs instead of binding posts. Series and multiple connections at each pupil's table. Switch in laboratory to cut out pupils' tables.

(7.) *Gas*.— Pupils' tables to be equipped with gas, 4 cocks to each table. Wall tables to be equipped with gas. Demonstration table to be provided with gas.

(8.) *Bulletin Board*.— 25 to 50 square feet of bulletin board, covered with burlap, secured at edges, but not glued on like wall paper.

(9.) *Blackboards*.— As much blackboard space as possible. Sliding blackboards back of demonstration tables.

APPARATUS ROOMS.

(1.) *Size*.— One large or several small rooms, to open directly out of laboratory, and connected with lecture-room.

(2.) *Equipment*.— To be fitted with dust-tight cases with adjustable shelves and sliding glass doors, 7 feet high; cabinets of drawers of various widths and depths, mostly narrow and shallow. Some of these cases may be in the laboratory if there is sufficient wall space. A small sink and hood should be provided.

SHOP.

(1.) A small shop is desirable, though not absolutely necessary. This should be equipped with work bench, power lathe, belted to motor

BOTANICAL AND
ZOÖLOGICAL
LABORATORY.

generator, and shelving for tools and stock, and may be set up in apparatus room.

(1.) *Size*.—In a space about 30 by 40 feet. Laboratory and apparatus room.

(2.) *Light*.—Windows the same as for class-rooms, one wall with southern exposure. Artificial light as in class-rooms.

(3.) *Equipment*.—(a) Twenty-one pupils' tables, 54 inches by 24 inches by 30 inches high, each to accommodate two pupils, to have plate glass tops.

(b) Soapstone sink, 72 inches by 30 inches, 10 inches deep, accessible on all sides. Supply with cold water, about 8 bibbs and 2 hose bibb cocks.

(c) One aquarium, 30 inches long, 20 inches wide and 20 inches high, with supply, gooseneck cock with aspirator and standing waste.

(d) Ice chest, 36 inches by 24 inches.

(e) Cases built wherever practicable. Three sections to contain 42 pigeon holes, 3 inches by 3 inches by 8 inches, for storage of instruments. A liberal supply of cases to contain drawers and cupboards in lower compartment, and shelves above for exhibition of specimens, storage of material, instruments, books, charts, etc.

(4.) *Furniture*.—Forty-two adjustable screw revolving chairs not in building contract.

GYMNASIUM
AND DRILL
HALL.

(1.) To be used in common for gymnasium exercises, athletic games, and the drilling of the school cadets. On account of its size and for structural conditions, to be generally located in the basement, with clear span of ceiling and combined height of basement and first story. Visitors' gallery generally provided at one end, entered from first floor.

(2.) *Size*.—The classes exercising in the gymnasium are from fifty to one hundred, and a suitable floor space for this number, as well as floor space for a full company of cadets at drill, is from 3,750 to 4,000 square feet. The height should not be less than 24 feet.

(3.) *Light*.—Ample outside light in all cases. Electric light from ceiling protected with wire guards.

(4.) *Heat and Ventilation*.—The former sufficient to guarantee a temperature of about 60 degrees, and about twice as much ventilation as is customary for the ordinary class-

room. This is, of course, insufficient for the number of people who might occasionally occupy the gymnasium for exhibitions, but it is more than enough for the ordinary number using it for class exercises.

(5.) *Equipment*.—The standard gymnastic apparatus consists of the following fixtures, which may be slightly modified in particular cases:

- 25 Bar stalls.
- 25 Bar stall benches.
- 4 Double booms.
- 4 Saddles.
- 20 Vertical ropes.
- 2 Inclined ropes.
- 2 Rope ladders.
- 5 Serpentine ladders.
- 2 Vertical ladders.
- 3 Horizontal ladders.
- 2 Boxes, 1 horse, 1 buck.
- 12 Balance boards.
- 2 4 by 7 mats.
- 2 5 by 10 mats.
- 4 Pairs jumping standards and ropes.
- 4 Inclined planes.
- 6 Travelling rings.
- 1 Pair basket ball goals.
- 3 Basket balls.
- 4 4-lb. medicine balls.
- 16 2-lb. medicine balls.
- 24 Small rubber balls, $2\frac{1}{2}$ to 3 in. in diameter.
- 8 Indoor baseballs.
- 1 Fairbanks scale.
- 1 Water spirometer.
- 1 Tape measure.
- 1 Dozen glass mouthpieces.
- 24 Bean bags.
- 1 Truck to carry mats.
- 1 Storming board.
- 6 Pairs $1\frac{1}{2}$ -lb. Indian clubs.
- 40 Pairs $\frac{3}{4}$ -lb. Indian clubs.
- 8 Chest weights.
- 1 Horizontal and vaulting bar.
- 1 Pair parallel bars.
- 2 Jump boards.
- 1 Shoulder caliper.

(6.) *Gun Racks*.—Racks for holding the guns carried by the cadets should be provided on wall. These racks should be protected by locked doors.

(7.) *Special Rooms*.—Adjoining gymnasium and drill hall two small rooms about 10 feet square should be provided for school matron and director of gymnasium.

(8.) *Dressing Rooms, Baths and Lockers*.—*(a.) System*. The clothing of all the pupils is in a central locker room, each suit being

numbered and all being under the control of the attendant in charge. Dressing-rooms are provided in number equivalent to the number of a class. A class coming for exercise is given their gymnasium clothing and keys to dressing rooms, which they lock behind them when exercising. After exercise they can take a shower bath. When dressed the dressing-room keys are given up, but the gymnasium clothing is left to be gathered up by the attendant. The clothing is carried to the dry-room, and when dried each set is put back in its proper pigeon hole.

(b.) *Lockers.*—The locker-room is controlled by the attendant, and contains pigeon holes, 10-inch cube, one for each pupil in the school, and a counter over which to deliver the clothing. Adjoining this is the dry-room, capable of being heated to a high temperature and thoroughly ventilated. This is fitted with hooks and clothes line.

(c.) *Dressing-rooms.*—The dressing-rooms are small cabins, about 3 feet square, with a locked door, a seat and hooks.

(d.) *Showers.*—The shower baths are 3 feet square, divided by slate partitions, similar to those for water-closets, each having a bar at the front, over which a cotton sheet can be dropped. Each compartment has two sprays in opposite corners.

HANDICRAFT ROOMS.

There should be space in one or more rooms for freehand drawing, mechanical drawing, woodworking, and metal-working.

(1.) *Size.*—The space should be about 3,000 to 3,600 square feet. The free-hand drawing-room should be preferably divided into two drawing-rooms, with a work room between.

(2.) *Light.*—Windows and artificial light, by special fixtures. North light preferable in the drawing-rooms.

(3.) *Floors.*—Of wood.

(4.) *Walls.*—As in a manual training room.

(5.) *Ceilings.*—As in a manual training room.

(6.) *Heating and Ventilation.*—Same as in class-rooms.

(7.) *Stock-room.*—The lumber stock-room should contain at least 80 square feet, preferably long and narrow. Two 18-inch shelves should run around the room, 5 feet 6 inches, and 6 feet from floor.

(8.) *Teachers' Closets*.—Teacher's closet in woodworking room should be large enough to be used for storage of finished work, and should be fitted with all shelving possible, as well as with the customary coat hooks. An area of 40 square feet is adequate.

(9.) *Fittings*.—(a.) Bookcases, like those in class-rooms, 150 capacity.

(b.) *Cases*.—For work in process, extra tools, supplies, drawing boards, models, paper, finished drawings, etc. (For all of these, see drawings.)

(c.) *Display Boards*.

(d.) *Sink*.—A 5-foot sink, with hot and cold water.

(10.) *Equipment of Free-hand Drawing-room*.—Provide accommodation for five divisions, each class about twenty-five pupils.

(11.) *Equipment for Mechanical Drawing-room*.—(See Fittings.) Also 12 double drawing tables, 7 feet 4 inches by 2 feet, with drawers for instruments.

(12.) *Equipment of Woodworking Room*.—Provide accommodation for four divisions, each class about 20 pupils: 20 benches, 36 inches by 18 inches, fitted with 2 vises, one to be a quick action, iron vise, 3 speed lathes, 1 jig saw, 1 circular saw.

(13.) *Equipment of Metal-working Room*.—Six double benches, 8 feet by 2 feet, fitted with 12 Prentiss iron vises, 3½-inch jaw; wall bench, fitted with 10 stations, tool drawers, and 5 Bower's tool holders; one ¼-inch gas hose cock terminal, above each bench station; 2 gas blast burners, 1 large, 1 small; metal-covered bench with ventilated hood; 1 muffle furnace, ventilated; 1 drill; 1 forge, ventilated; 1 anvil; 1 grindstone; 1 table tool rack; 1 pair bench shears; 1 engine lathe.

(14.) *Motor*.

HOUSEHOLD SCIENCE.

(1.) *Size*.—The space should be about 1,200 square feet, and should accommodate the kitchen, two small rooms for showing the care of a dining-room and of a bedroom, and a china-closet and pantry.

(2.) *Light, Heat, etc.*—The same as that for other rooms, with additional ventilation in the kitchen.

(3.) *Equipment*.—The kitchen to contain the same equipment as that for grammar school cooking-rooms, but for 24 stations only;

a kitchen pantry fitted with shelving and a china closet fitted with a sink; drawers, cupboards and shelves enclosed with glass doors. The dining-room and bedroom simply finished rooms, having no equipment except the furniture.

LUNCH ROOMS.

(1.) *General*.—The lunch rooms in Boston schools have usually been located in the basement, and where these are high and well lighted, this location seems to serve satisfactorily. They should, however, have the special ventilation that is provided in a basement cooking room. In size, they should accommodate comfortably, seated at benches or small tables, that proportion of the pupils in the school which take advantage of the luncheon facilities.

(2.) *Equipment*.—(a.) The counter should be set at 2 feet 8 inches high, and should have a rail 2 feet from it, with openings at intervals, to keep children in single file, and there should be accommodation under the counter for dishes.

(b.) *Range*.—A six-hole gas range, with ample oven space.

(c.) *Sinks*.—Two good-sized soapstone sinks.

(d.) *Ice Box*.—Of sufficient size to take care of milk supply.

(e.) *Lockers*.—Sufficient to care for the clothing of the attendants, and for mops and brooms, etc. These should not be under the counter, or near any place where food is kept.

(f.) *Furniture*.—In some cases the children are provided with camp chairs and small round tables to seat four. In others, ordinary school benches have been provided. Both seem fairly satisfactory in operation.

LIBRARY.

(1.) A space equivalent to a small classroom is ample for library purposes. The book accommodation will depend somewhat on the size of the school. The library is planned as a reading-room, that is, with the books in the room and not in a separate stack-room.

WARDROBES.

(1.) In high schools common wardrobes are—one for boys and one for girls—advised for all the clothing, situated on the lower floor to avoid bringing dirt into the upper floors. There being an attendant on the lower floor, the room as a whole can be locked up.

(2.) *Light*.—The rooms should have outside light.

(3.) *Heat and Ventilation*.— This should be thoroughly well heated and ventilated, similar to class-rooms.

(4.) *Equipment*.— The poles, hooks, etc., will be similar to those used in the other schools, but more space should be given the girls, *i. e.*, about 1 foot 6 inches on center. It has been found desirable to have some locked pigeon-holes, 20 by 20 by 12 inches.

HEATING VENTILATION AND ELECTRIC SYSTEMS.

HEATING AND VENTILATION GRAVITY SYSTEM.

(1.) *Heat Ducts for School-rooms.*

(a.) *Location*.— In a corner room, locate the duct on the inside wall within 10 feet of the outside wall. In a room with one outside wall, locate the duct on the inside wall, near the middle.

(b.) *Size*.— Allow one square foot area of duct for each nine occupants. The opening into the room is to be the same area as the duct. The bottom of the opening is to be about 8 feet 6 inches above the floor. Galvanized-iron deflectors, painted to match the adjoining walls, will be placed in each opening. In addition, there will be a galvanized-iron ground around the opening.

(2.) *Vent Ducts for School-rooms.*

(a.) *Location*.— In a corner room, locate the duct at the inside corner of the room, and where possible on the same wall as the heat duct. In a room with one outside wall, the duct is to be on the same inside wall as the heat duct, and as near the middle as possible.

(b.) *Size*.— Allow about one square foot area of duct for each ten occupants. The opening into the room will be at the floor, and will be the full size of the vent duct. There will be no guard at the opening. The floor will be carried into the bottom of the duct, and the baseboard will be carried in and around. The inside of the duct exposed to view will be plastered and finished to match the adjoining walls.

PLENUM FAN SYSTEM.

(1.) *Heat Ducts for School-rooms.*

(a.) *Location*.— In a corner room, locate the duct within ten feet of the outside wall. In a room with one outside wall, locate the duct on the inside wall, near the middle.

(b.) *Size.*— Allow one square foot area of duct for each ten occupants. The opening into the room is to be one-third larger than the area of the duct. The bottom of the opening is to be about 8 feet 6 inches above the floor. Galvanized-iron deflectors, painted to match the adjoining walls, will be placed in each opening. In addition, there will be a galvanized-iron ground around the opening.

(2.) *Vent Ducts for School-rooms.*

(a.) *Location.*— The location and size will be the same as those for the Gravity System.

TOILET-ROOM.
VENTS.

(1.) *Duct.*— Allow 10 square inches of duct area for each closet and 8 square inches for each lineal foot of urinal space.

(2.) *Opening.*— Each door into the toilet-room is to have an opening either in the lower panel, with a register face on each side, or underneath the door. The net area through the opening in either case is to be equal to the area of the main vent duct from the room.

WARDROBE
VENTS.

(1.) * *Duct.*— Each wardrobe is to have a vent-duct with an area of $1\frac{2}{3}$ square feet and having a register at the bottom of the room.

(2.) * *Opening.*— The door leading into the wardrobe at the end farthest from the vent duct is to have an opening similar to that for a toilet-room, so that the air can pass from the school-room into the wardrobe and thence out through the duct.

ELECTRIC
WORK.

(1.) *Service.*— This should enter basement underground at location to be determined by reference to street mains, and should terminate on a switchboard located in a fire-proof closet, opening if possible into the basement corridor.

(2.) *Conduits.*— All wires to be run in iron conduit concealed, except conduits for mains in basement, and side outlets in boiler, engine and stack rooms. Tap circuit conduits to be run above rough floor wherever possible. If floor construction will not allow this they are to run below floor beams and above ceiling, a space of 2 inches being left in which they can be run.

(3.) *Wire Slot.*— Obtain from electrical division the location of slots and openings for conduits and panel boards.

* This would be modified if the Chicago system of wardrobes is adopted.

(4.) *Cabinets*.— All cabinets to be furnished by wiring contractor, but finished by the general contractor.

(5.) *Cutting*.— All cutting and patching to be done by the general contractor.

(6.) *Outlets*.— Class-rooms to be provided with 9 four-light ceiling outlets, controlled by 3 switches. Wardrobes to have 1 ceiling outlet, controlled by switch in class-room. Corridors to be lighted from ceiling wherever possible. Height of side outlets in rooms to be 6 feet and in corridors 6 feet 4 inches. Switch outlets to be 4 feet. Switches in corridors, play-rooms, and pupils' toilet-rooms to be operated by private key.

(7.) *Fixtures*.— Fixtures in class-rooms to be of special design to combine a direct and diffused light.

(8.) *Gas*.— Gas outlets to be provided in all corridors, vestibules, stairways, boiler-room and assembly hall exits; all except vestibule to be wall outlets. Gas-piping to be included in the electrical engineer's work.

(9.) *Stereopticon*.— All grammar schools and high schools to be provided with an electric projection lantern with reflectoscope attachment.

(10.) *Clocks and Bells*.— All schools to be provided with an electric system of clocks, operated by a master clock. All primary schools to be provided with a system of signal bells, operated by push buttons. In all grammar and high schools the bell system to be operated automatically by mater clocks, according to prearranged program.

(11.) *Telephones*.— In all schools, each class-room, hall, teachers' room and boiler-room to be connected to master's office, or to room occupied by the first assistant, by a telephone system.

NOTE.— Drawings showing special fittings for both plumbing and interior fittings will be found in Appendices IX., X., and XI.

APPENDIX VIII.

REPORT ON RENTS COLLECTED BY THIS DEPARTMENT FROM BUILDINGS LOCATED ON LAND TAKEN BY THE CITY.

It frequently happens when land is taken by the city for schoolhouse purposes that buildings of rentable character are included. Previous to September, 1903, no effort was made to retain or get tenants for such buildings; usually the tenant moved out as soon as the city obtained title to the property, and the buildings were allowed to stand idle until the erection of a new schoolhouse was begun. Any rents that might be collected in the meantime were usually taken care of by the agent through whom the property was purchased and by him turned over to the City Collector.

On September 1, 1903, the department took direct charge of the various properties and endeavored to obtain as much return for their use as possible by encouraging the tenants to remain until the buildings were to be torn down and, if possible, renting vacant apartments. Rents were collected and necessary repairs made; the balance of rent was turned over to the City Collector. The average time during which such buildings could be rented was about six months, but in some instances it was considerably longer.

The buildings on the land purchased for the addition to the Mechanic Arts High School remained in possession of the city for four years. They consisted of six houses of four apartments each and a business block. For the former the department was obliged to furnish a janitor, heat the buildings and light the halls, thus necessitating quite a large expense for maintenance.

In 1906 it was decided to advertise for bids for the erection of the new school, and the apartments were accordingly vacated. After the bids were received it was decided to postpone the work and the tenements were again rented. It was necessary, however, to expend a very considerable sum of money in repairing the damage caused by the investigations of the various bidders before this could be done.

Properties held by this department from September 1, 1903, to February 1, 1909, and income and expense of the same:

	Income.	Expenses.
James Otis School site	\$212 00	*\$571 43
Tuckerman School site	1,948 75	250 67
Bishop Cheverus School site	188 65	81 27
Charlestown High School site	2,017 50	599 95
Mechanic Arts High School site	15,875 02	11,486 15
Edward Everett School site	83 33	†145 99
Peter Faneuil School site	2,027 45	1,795 86
Abraham Lincoln School site		
Paid City Collector		6,500 00
	22,352 70	\$21,431 32
Balance on hand, February 1, 1909		921 38

* Includes \$200 paid for tearing down some of the buildings, and \$137.50 paid for filling portion of lot by order of Board of Health.

† \$114.75 paid for clearing the premises of gypsy and brown-tail moths.



APPENDIX IX.

A hand-drawn floor plan of a laboratory building. The plan includes the following rooms and features:

- LABORATORY:** A large central room with two long wooden benches, each with a row of drawers. Above the benches is a long shelf labeled "SHELVING IN WOOD".
- STOCK ROOM:** Located to the left of the Laboratory, containing a "CUPBOARD" and a "CUP".
- PREPARATION ROOM:** Located below the Laboratory, containing a "SINK" and a "SLATE SHELF".
- OFFICE:** Located below the Preparation Room, containing a "CASE".
- WATER SUPPLY AND WASTE HERE:** Located to the right of the Laboratory, with a "WATER OUTLET HERE FOR ASPARTIC ACID" and a "WOOD-SHELF".
- Other features:** A "SINK" is located in the Laboratory, and a "SLATE SHELF BUILT INTO WALL AND SUPPORTED ON IRON BRACKET" is located in the Preparation Room.

FOR QUICK FILLING

• SIDE • ELEVATION •

A hand-drawn diagram of a rectangular rack for maps and charts. The diagram includes the following labels and dimensions:

- Top Labels:** "MERCURY RINGS SLATE SLAB TOP" and "C/ELEC PLUGS".
- Left Side:** Dimensions "2'-9\" and "1'-10\" are marked. A dashed line indicates a "SHIPPED IN 1'-4\" section.
- Right Side:** A label "GOOSE FECK UNDER REDUCED PRESSURE" points to a specific area.
- Bottom Labels:** "PINE TOP" and "RACK FOR MAPS AND CHARTS BELOW".
- Bottom Dimensions:** "12'-0\" and "12'-0\" are marked.
- Other Labels:** "ELEC. W/PLUGS" is written near the top center, and "SPRINGING GULK" is at the bottom left.

The image contains three technical drawings of a refrigerator, labeled 'SECTION A-B', 'SECTION C-D', and 'END'.
 - **SECTION A-B:** A cross-section of the refrigerator. It shows a top compartment labeled 'HOT' and a bottom compartment labeled 'COLD'. The bottom compartment contains a large rectangular space with a central vertical line and a small circle at the bottom. The drawing is labeled 'SECTION A-B' below it.
 - **SECTION C-D:** A side view of the refrigerator showing the internal structure of the door and the main body. It is labeled 'SECTION C-D' below it.
 - **END:** A front view of the refrigerator showing the door and the main body. It is labeled 'END' below it.

2 1/4"

WHITE PINE TOP
BALANCE OF TABLE WHITE OAK

• END •

• SECTION •

[illegible]

70

DOUBLE GAS TERMINAL

6'-6"

PLAN

ELECT

2'-0"

PLATE GLASS TOP.

4'-6"

PLAN.

Technical drawing of a table with dimensions and views. The top view shows a table with a width of 10'-0" and a shelf 10" wide on each side. The front view shows a table with a width of 2'-6" and a height of 2'-6". The side view shows a table with a width of 2'-6" and a height of 2'-6". The drawing is labeled with dimensions and views: 10'-0", 10" SHELF, 10" SHELF, 2'-6", FRONT, 2'-6", END, SECTION.

[illegible]

KEY
-O GAS
-X ELEC

• LABORATORY •

Floor plan of the kitchen area showing various fixtures and dimensions:

- Top Left:** A small square area labeled "ICE BOX".
- Top Center:** A rectangular area labeled "SQUARE STOVE".
- Top Right:** A rectangular area labeled "SINK".
- Left Wall:** A long vertical area labeled "BLACKBOARD".
- Bottom Left:** A rectangular area labeled "WORK TABLE".
- Bottom Center:** A rectangular area labeled "TABLE".
- Bottom Right:** A rectangular area labeled "WASTE".
- Dimensions:**
 - A horizontal dimension of $4'-0"$ is marked across the top.
 - A vertical dimension of $32'-0"$ is marked on the right side.
 - A small dimension of $4'-6"$ is marked near the top right.
- Other Labels:**
 - "CONSERVATORY" and "STEAM COIL" are labeled near the bottom left corner.
 - An arrow points from the text "WINDOWS TO GO HERE" at the bottom towards the conservatory area.

• SOUTH • EXPOSURE •

DEMONSTRATION
TRUSLE FLOOR

FIN. FLOOR

SECTION.

FIN. FLOOR

SECTION THROUGH
PUPILS' DESK AND CHAIR.
SEE PLAN BELOW.

The drawing consists of two parts. The top part is a plan view showing a row of desks and chairs. The desks are labeled 'DEMONSTRATION TRUSLE FLOOR' and 'FIN. FLOOR'. The bottom part is a section view labeled 'SECTION THROUGH PUPILS' DESK AND CHAIR. SEE PLAN BELOW.' This section shows the vertical dimensions of the desk and chair. Key dimensions include: a total height of 27 inches from the finished floor to the top of the desk; a desk height of 23 inches; a desk depth of 16 inches; a chair seat height of 15 inches; a chair seat depth of 16 inches; a chair back height of 15 inches; and a chair back width of 16 inches. The section also shows the 'FIN. FLOOR' and the 'DEMONSTRATION TRUSLE FLOOR'.

Diagram illustrating a window blind system with the following components and labels:

- Blind Structure:** A curved structure with two rows of circles (slats). Labels "STEP 1" and "STEP 2" are on the left and right sides.
- Dimensions:** A horizontal line below the blind is labeled "15'-0".
- Components:**
 - REFLECTORSCOPE:** Indicated by an arrow pointing right.
 - DIMENSIONING:** A box labeled "DIMENSIONING".
 - TABLE:** A box labeled "TABLE" with "6" and "12" markings.
 - SLIDING BLACK BOARD:** A box labeled "SLIDING BLACK BOARD" with a "5" marking.
 - WOOD:** A box labeled "WOOD".
 - SOAPSTONE SHELF:** A box labeled "SOAPSTONE SHELF" below the table.
 - BLAST:** Indicated by an arrow pointing left.
 - CURTAIN:** A vertical line on the right side labeled "CURTAIN".
- Fastening:** A label "2"X10" PINE PLANK SECURELY FASTENED TO CEILING BEAMS" points to the top of the table.
- Plan View:** The diagram is labeled "P L A N" and "WINDOWS AT REAR OF ROOM".

DRAWERS

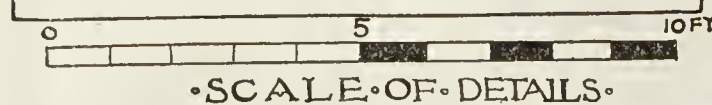
DRAWING-BOARDS

DRAWERS BEHIND

DRAWING-BDS BEHIND

DOORS HERE SAME AS OTHER COMPARTMENTS

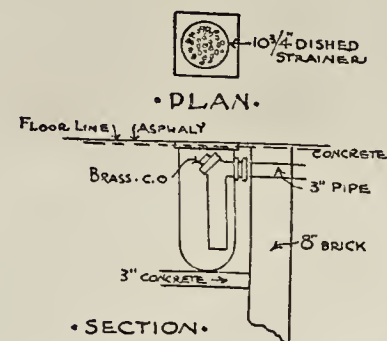
FRONT SECTION
• DUDILS TABLE •



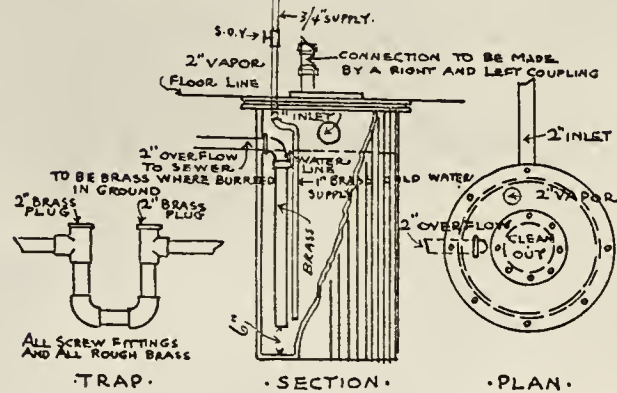
APPENDIX X.

PLUMBING.

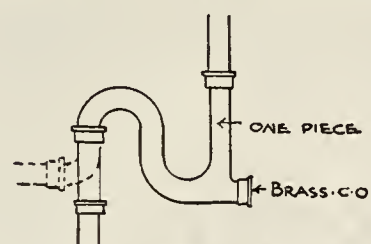
FLOOR WASH.



BLOW OFF TANK.



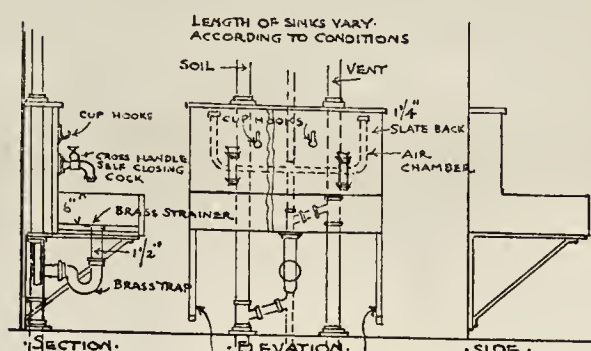
CONDUCTOR TRAP.



NO TRAP REQUIRED WHERE SEPARATE CONNECTION TO SURFACE DRAINAGE OCCURS.

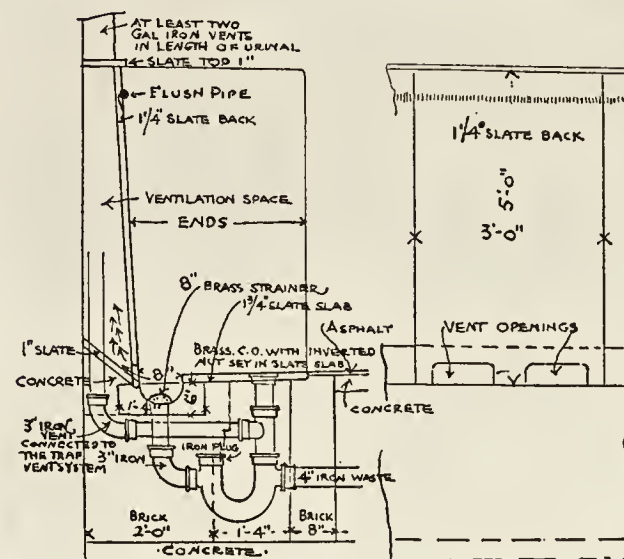
STANDARDS.

SLATE SINK.



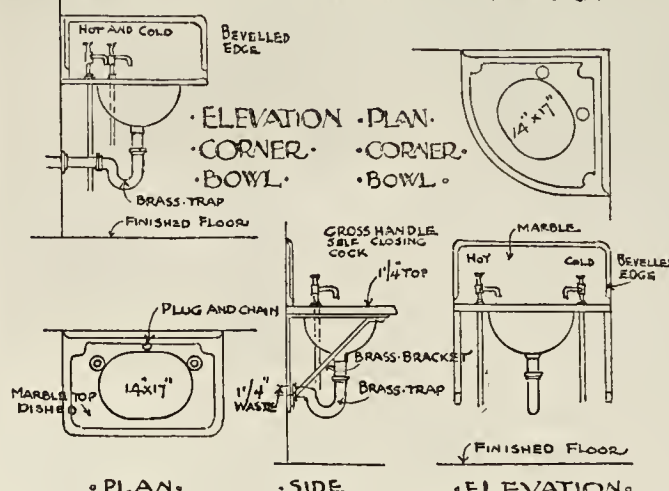
NOTE: BRACKETS TO BE PLACED 3 INCHES IN BASEMENT SIZE OF SINKS. IN BASEMENT TO BE OBTAINED FROM SCHEDULE IN SPECIFICATIONS.

SLATE URINAL.

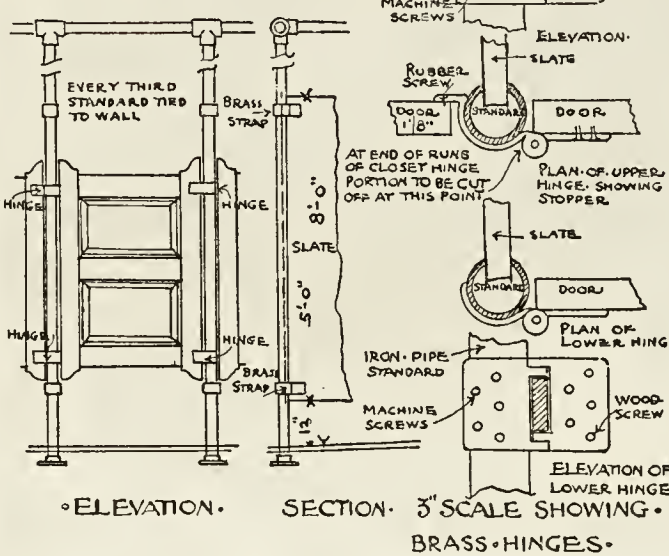


• ELEVATION.

LAVATORY BOWLS.

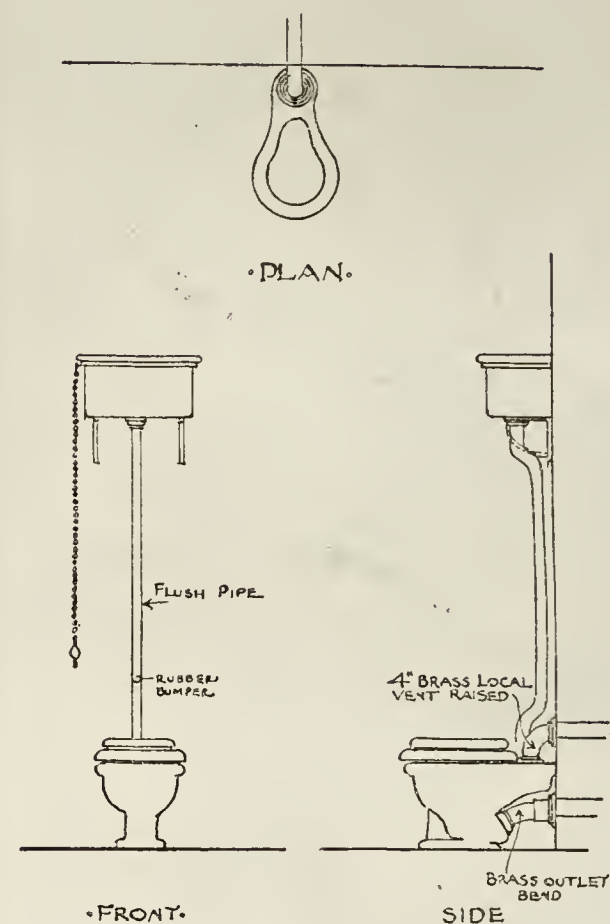


WATER CLOSET DOORS.

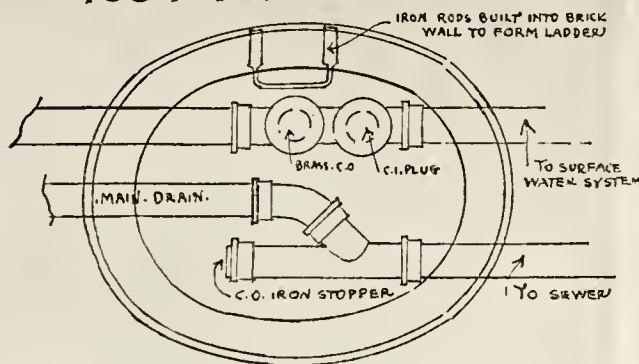


CITY OF BOSTON SCHOOLHOUSE DEPARTMENT.

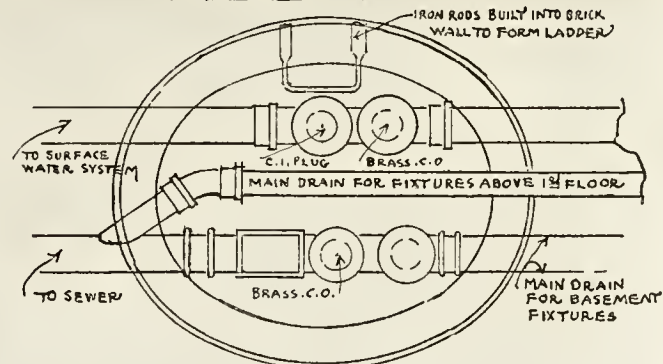
TEACHERS CLOSET.



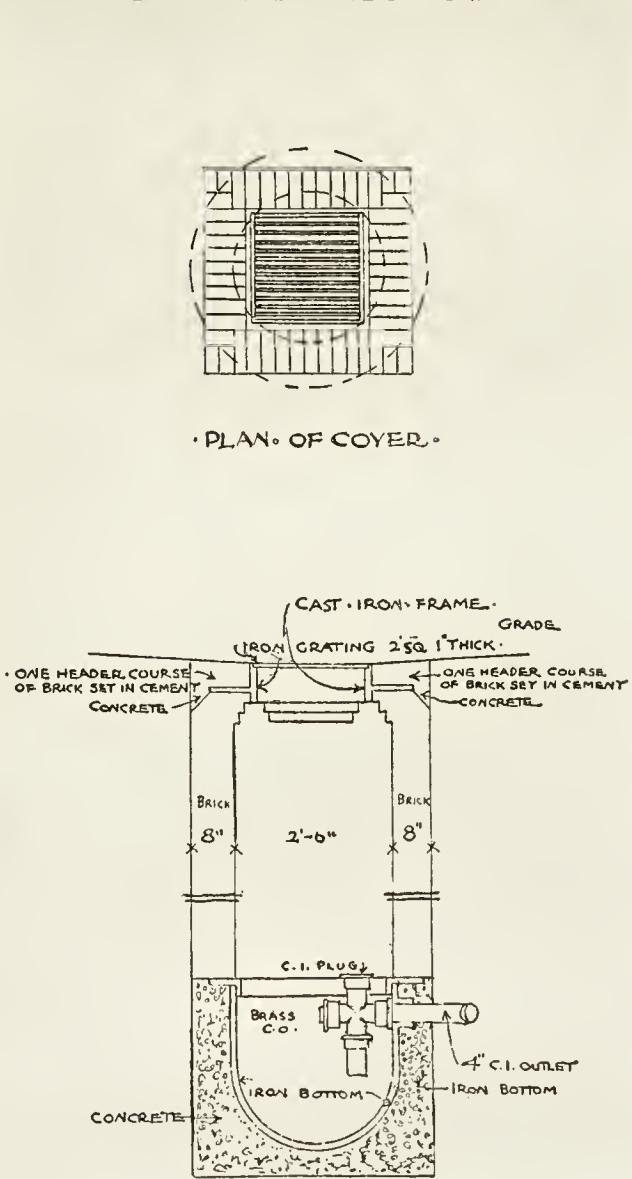
RUNNING TRAP.



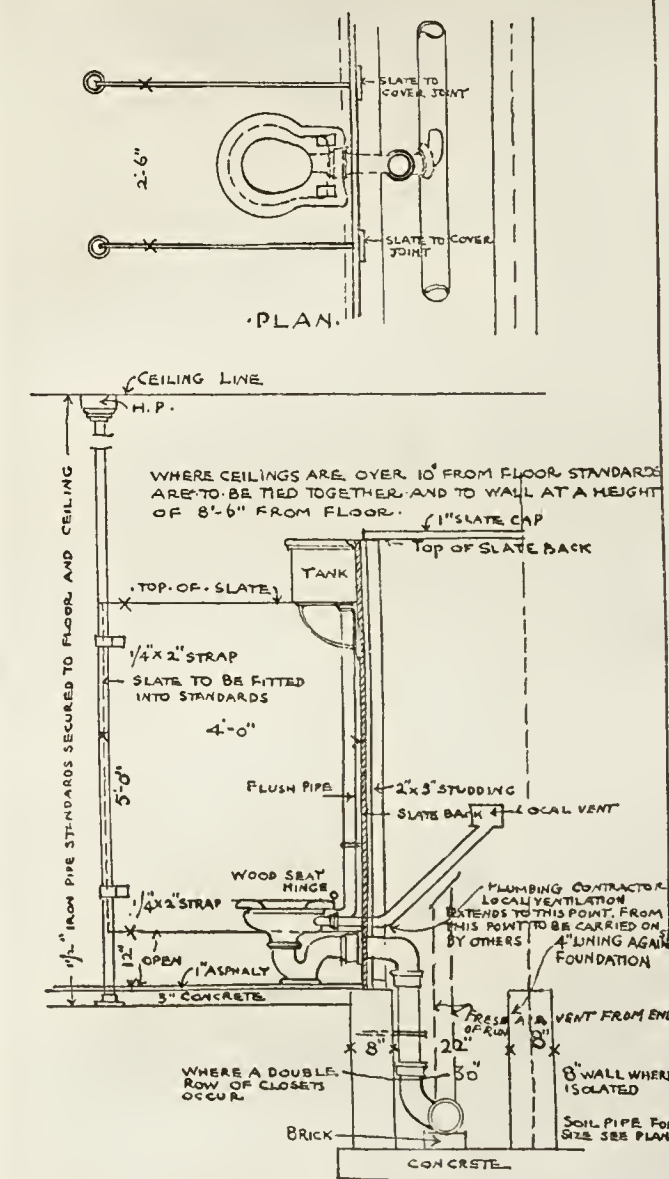
TIDE TRAP.



CATCH BASIN.



SHORT HOPPER CLOSET.



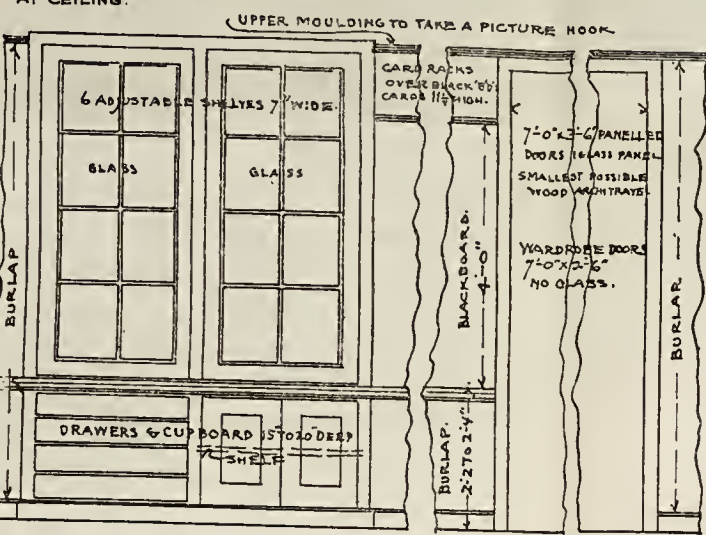
APPENDIX XI.

STANDARDS OF GENERAL DETAIL

CITY OF BOSTON SCHOOLHOUSE DEPARTMENT

BOOK CASES

SCALE $\frac{1}{2}'' = 1 \text{ FOOT}$

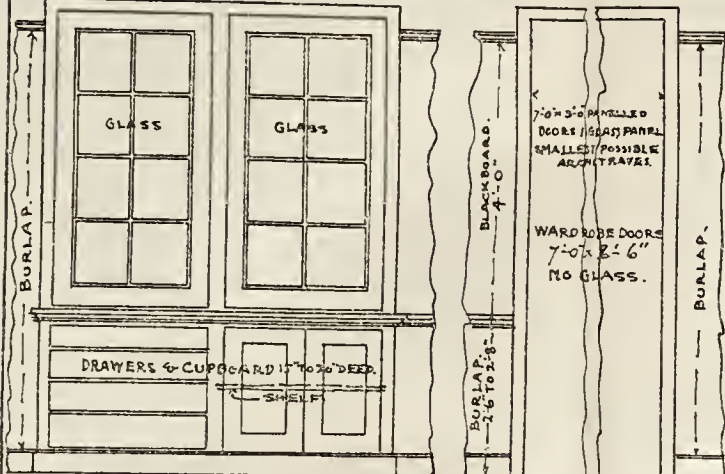


BOOK CASES FOR PRIMARY SCHOOLS.

ALL DOORS & DRAWERS TO LOCK.

STOCK PICTURE MOULDING AT CEILING.

MOULDING ALL AROUND ROOMS TO TAKE A PICTURE HOOK.

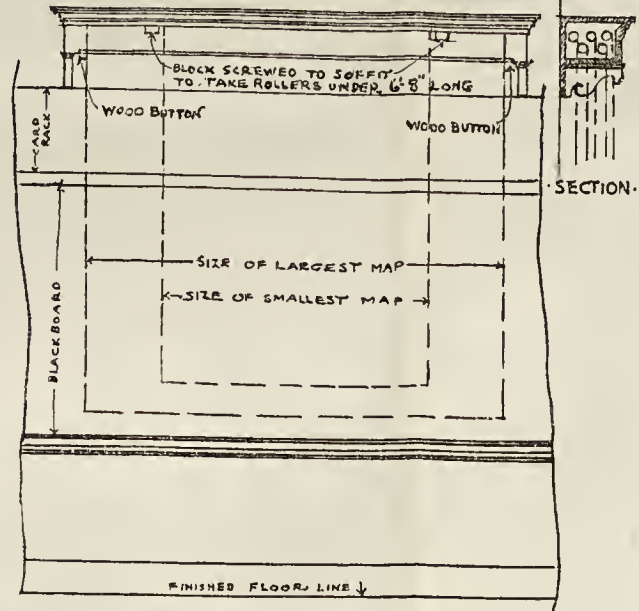


BOOK CASES FOR GRAMMAR SCHOOLS.

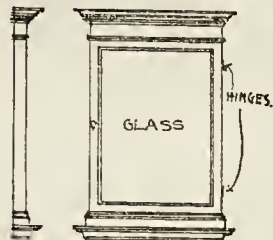
SCALE 0 1 2 3 4 5 6 7 FEET

MAP HOLDER BULLETIN BOARD ETC.

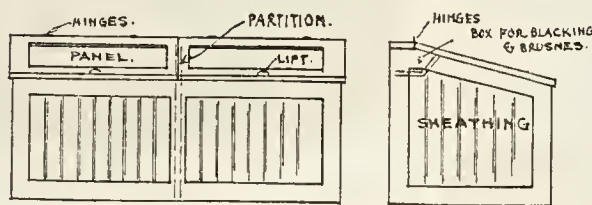
SCALE $\frac{1}{2}'' \& \frac{3}{4}'' = 1 \text{ FOOT}$



ELEVATION OF MAP HOLDER.



BULLETIN BOARD SCALE $\frac{1}{2}'' = 1 \text{ FOOT}$.

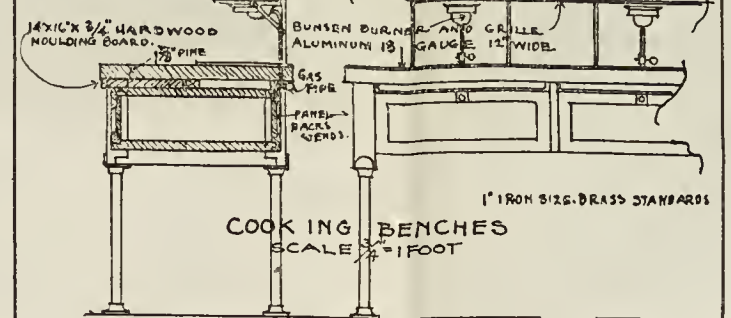


WOOD & COAL BOX SCALE $\frac{1}{2}'' = 1 \text{ FOOT}$

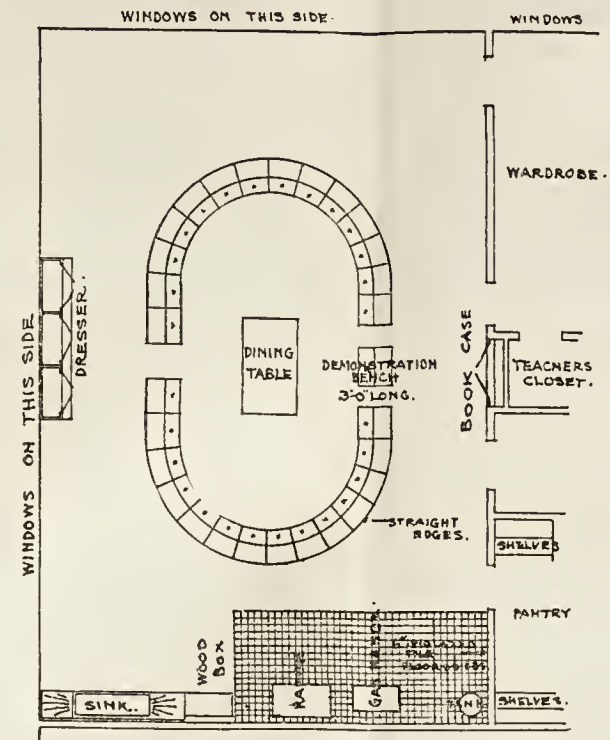
SCALE 0 1 FOOT.

COOKING ROOM FITTINGS

SCALE $\frac{3}{4}'' \& \frac{1}{2}'' = 1 \text{ FOOT}$



COOKING BENCHES SCALE $\frac{1}{2}'' = 1 \text{ FOOT}$

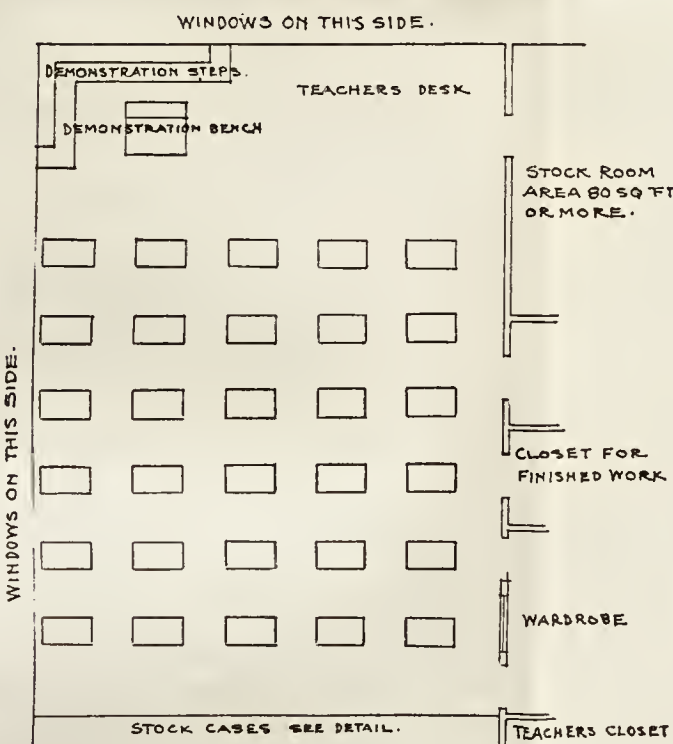


PLAN OF COOKING ROOM SCALE $\frac{1}{2}'' = 1 \text{ FOOT}$.

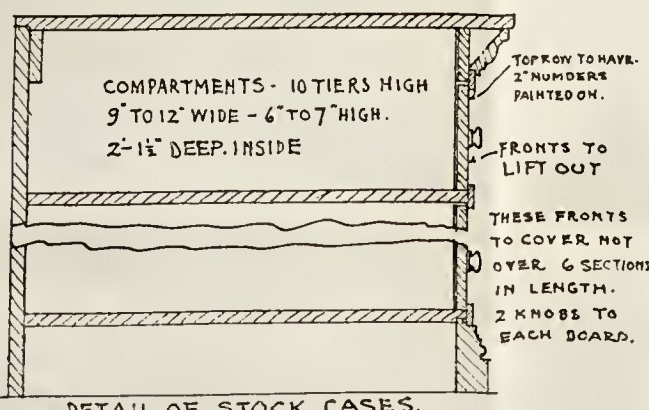
FEET 3 2 1 0 SCALE

MANUAL TRAINING ROOM

SCALE $1\frac{1}{2}'' \& \frac{1}{8}'' = 1 \text{ FOOT}$



PLAN OF MANUAL TRAINING ROOM SCALE $1\frac{1}{2}'' = 1 \text{ FOOT}$

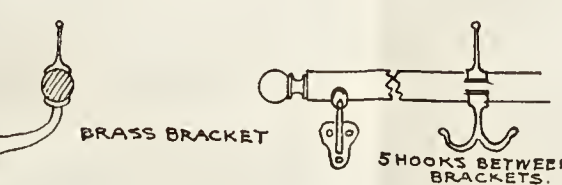
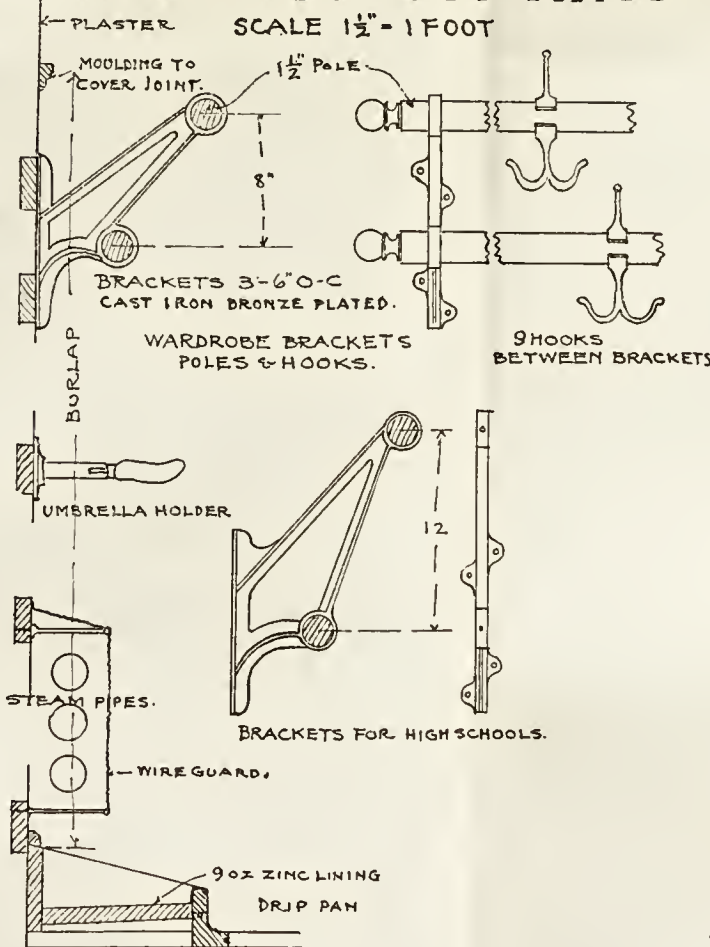


DETAIL OF STOCK CASES. SCALE $1\frac{1}{2}'' = 1 \text{ FOOT}$.

SCALE 0 1 2 FEET

WARDROBE FITTINGS

SCALE $1\frac{1}{2}'' = 1 \text{ FOOT}$

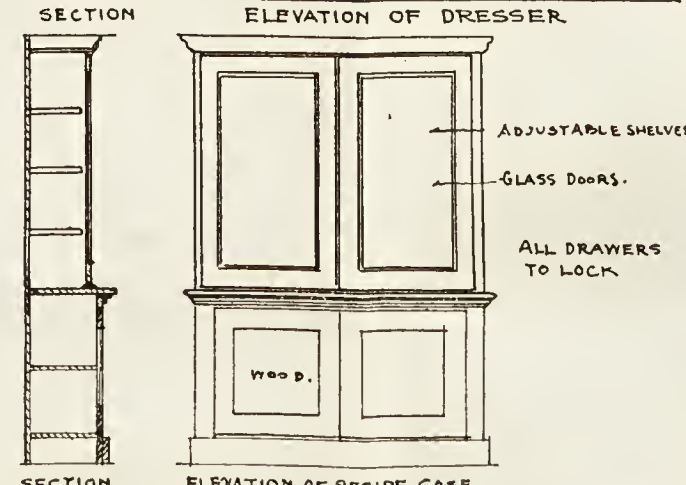
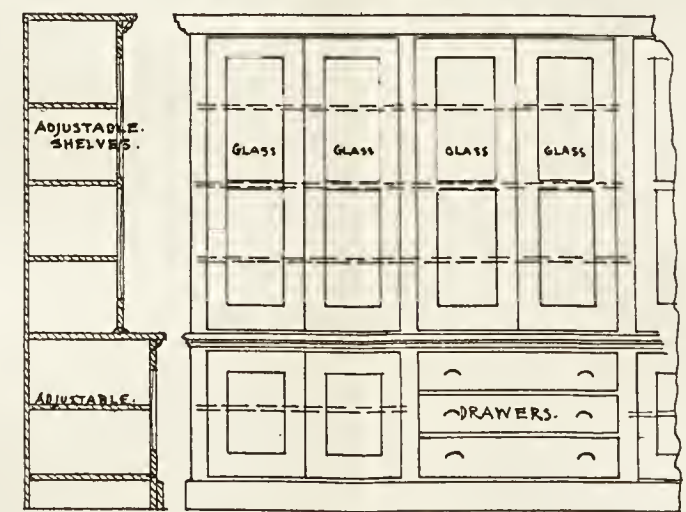


DETAIL OF CLOTHES POLES USED WHEN ALL SIDES OF WARDROBES ARE UTILIZED.

SCALE 0 1 2 FEET

COOKING ROOM FITTINGS

SCALE $\frac{1}{2}'' = 1 \text{ FOOT}$



SCALE 0 1 2 3 4 FEET

APPENDIX XII.

Year	Population	Area	Population	Area	Population	Area
1870	1,000,000	100,000	1,000,000	100,000	1,000,000	100,000
1880	1,200,000	120,000	1,200,000	120,000	1,200,000	120,000
1890	1,400,000	140,000	1,400,000	140,000	1,400,000	140,000
1900	1,600,000	160,000	1,600,000	160,000	1,600,000	160,000
1910	1,800,000	180,000	1,800,000	180,000	1,800,000	180,000
1920	2,000,000	200,000	2,000,000	200,000	2,000,000	200,000
1930	2,200,000	220,000	2,200,000	220,000	2,200,000	220,000
1940	2,400,000	240,000	2,400,000	240,000	2,400,000	240,000
1950	2,600,000	260,000	2,600,000	260,000	2,600,000	260,000
1960	2,800,000	280,000	2,800,000	280,000	2,800,000	280,000
1970	3,000,000	300,000	3,000,000	300,000	3,000,000	300,000
1980	3,200,000	320,000	3,200,000	320,000	3,200,000	320,000
1990	3,400,000	340,000	3,400,000	340,000	3,400,000	340,000
2000	3,600,000	360,000	3,600,000	360,000	3,600,000	360,000
2010	3,800,000	380,000	3,800,000	380,000	3,800,000	380,000
2020	4,000,000	400,000	4,000,000	400,000	4,000,000	400,000
2030	4,200,000	420,000	4,200,000	420,000	4,200,000	420,000
2040	4,400,000	440,000	4,400,000	440,000	4,400,000	440,000
2050	4,600,000	460,000	4,600,000	460,000	4,600,000	460,000
2060	4,800,000	480,000	4,800,000	480,000	4,800,000	480,000
2070	5,000,000	500,000	5,000,000	500,000	5,000,000	500,000
2080	5,200,000	520,000	5,200,000	520,000	5,200,000	520,000
2090	5,400,000	540,000	5,400,000	540,000	5,400,000	540,000
2100	5,600,000	560,000	5,600,000	560,000	5,600,000	560,000

DESCRIPTIVE SCHEDULE OF PERMANENT SCHOOL BUILDINGS.

DATE OF COMPLETION.	NAME.	DISTRICT.	ARCHITECT.	DESCRIPTION.	LOCATION OF LOT.	AREA OF LOT.	COST OF LOT.	AREA OF BUILDING.	CUBIC CONTENTS OF BUILDING.	COST OF BUILDING.	COST PER CUBIC FOOT.	RATED NO. OF PUPILS.	COST PER PUPIL.	
1870	Aaron Davis.	12 Rooms P.	Dearborn.	2d Class, 3 Stories.	Yeoman st., Rox.	18,200	\$17,100 00	5,080	198,912	\$44,872 62	0.23	600	\$74 79	
1883	Ally W. May.	6 " P.	Dillaway.	2d " 2 "	Thornton st., Rox.	11,052	5,845 36	4,510	108,010	13,960 00	0.17	300	136 87	
1897	Aherdeen.	6 " P.	Dillaway.	2d " 1 Story.	Chestnut st., Dor.	23,000	13,780 00	3,500	117,108	19,989 76	0.17	100	199 90	
1856	Adams.	13 " G.	Adams.	2d " 3 Stories.	Belmont sq., E. B.	21,000	9,950 00	5,627				650		
1900	Adams and Chestnut street.	2 Rooms P.	Frothingham.	3d " 1 Story.	Adams and Chestnut sts., Chsn.	20,300	30,885 78	2,654		3,518 00		100	35 18	
1893	Adams-street.	2 " P.	Gilbert Stuart.	2d " 3 Stories.	Adams st., Dor.	44,555		1,570		99,184 23	0.15	700	141 69	
1893	Agassiz.	14 " P.	Agassiz.	2d " 2 "	Brewer st., J. P.	42,244		4,721	212,016	45,500 00	0.21	300	151 67	
1895	Albert Palmer.	4 " P.	Dearborn.	2d " 2 "	Eustis st., Rox.	16,165						100		
1896	Andrews.	9 Rooms P.	Quincy.	1st 2d " 3 "	Genesee st., Dor.	12,578	47,506 29	4,658		165,604 24	0.25	450	145 79	
1870	Appleton-street.	12 " P.	Rice Training.	2d " 3 "	Appleton st., Dor.	18,454	28,465 26	5,660		38,068 98	0.18	400	95 17	
1870	Ass Gray.	8 " P.	Hyde.	2d " 2 "	Venue st., Rox.	14,973		5,890	211,904	48,022 80		400	120 06	
1872	Atherton.	8 " P.	Christopher Gibson.	2d " 2 "	Columbia rd., Dor.	24,751	11,289 15	5,210				200		
1856	Auburn.	4 Rooms P.	Thomas Gardner.	3d " 2 "	School st., Bri.	12,340		1,490				300		
1849	Austin.	6 " P.	Lyman.	2d " 3 "	Paris st., E. B.	4,840		2,176		3,025 51		200	151 28	
1840	Bailev-street.	4 " P.	Henry L. Pierce.	3d " 2 "	Bailey st., Dor.	3,828	11,979 75	2,176		13,488 00		300	44 96	
1849	Ballwin.	6 " P.	Washington.	2d " 3 "	Chardon ct.	6,139		2,276				200		
1892	Bartlett-street.	6 Rooms P.	Dillaway.	2d " 3 "	Bartlett st., Rox.	7,627		2,280		181,776	0.22	300	133 30	
1892	B. B.	6 " P.	Bunker Hill.	2d " 2 "	Cambridge st., Chsn.	16,727	14,246 30	4,530		39,991 05	0.18	400	161 09	
1899	Benjamin Cushing.	6 " P.	Bunker Hill.	2d " 2 "	Robinson st., Dor.	16,727	21,830 00	5,593		42,987 28	0.18	400	107 47	
1899	Benjamin Dean.	8 " P.	Thomas N. Hart.	2d " 2 "	Robinson st., Dor.	14,477						200		
1883	Benjamin Pope.	8 Rooms P.	Gaston.	2d " 2 "	Ost. S. B.	20,000	6,000 00	5,370	238,336	45,507 37	0.19	400	112 97	
1883	Bennett.	7 " G.	Bennett.	2d " 3 "	Chestnut Hill ave., Bri.	26,648	12,824 50	5,906		74,516 84		350	212 91	
1880	Bennett Branch.	6 " P.	Bennett.	2d " 3 "	Dighton st., Bri.	9,905	4,846 70	3,998				300		
1901	Bigelow.	19 " G.	Bigelow.	2d " 3 "	West Fourth st., S. B.	26,704	48,465 21	13,995	828,415	179,260 58	0.21	950	188 70	
1892	Blackinton.	9 Rooms P.	Blackinton.	2d " 2 "	Leyden st., Orient Heights, E. B.	29,166		6,864	281,344	56,027 11	0.20	450	124 50	
1892	Bowditch.	15 " G.	Bowditch.	2d " 2 "	Green st., J. P.	28,655		8,469	518,224	104,579 01	0.17	750	139 44	
1895	Brewster.	16 " G.	Bowditch.	2d " 3 "	Morton st., Mat.	10,777	35,120 84	3,042		109,187 91	0.18	800	136 46	
1898	Brewster Annex.	4 Rooms P.	Roger Wolcott.	1st " 1 Story.	Morton st., Mat.	34,895		2,173		26,100 48	0.18	200	130 50	
1895	Brighton Annex.	2 Rooms P.	Schoolhouse Agent Department.	3d " 3 Stories.	Morton st., Mat.	41,571	17,660 00	11,685		3,099 97		100	31 00	
1895	Brimmer.	14 Rooms G.	Brimmer.	2d " 3 Stories.	Cambridge st., Bri.	15,800	21,830 00	5,590		135,887 98	0.19	700		
1895	Bunker Hill.	14 " G.	Bunker Hill.	2d " 4 "	Common st., Dor.	19,590		5,580				700		
1845	Bunker Hill.	8 Rooms P.	Bunker Hill.	2d " 2 "	Baldwin st., Chsn.	20,121		2,938				400		
1894	Canbury-street.	2 " P.	Charles Sumner.	3d " 3 "	Carterbury st., W. R.	20,121		1,346				100		
1871	Cape.	2 " P.	Charles Sumner.	3d " 3 "	Sixth st., S. B.	12,354	5,115 31	3,430		34,716 35		100	115 72	
1901	Chapman.	17 " G.	Chapman.	2d " 3 "	Eutaw et., E. B.	29,150	22,406 00	12,131		103,944 83	0.18	850	154 05	
1891	Charles C. Perkins.	10 Rooms P.	Prince.	2d " 2 "	St. Botolph st.	18,000	36,356 45	7,720		76,500 00	0.23	500	153 00	
1907	Charles Sumner.	10 " G.	Charles Sumner.	2d " 3 "	St. Botolph st.	30,000	6,000 00	6,142		457,532	0.25	500	100 50	
1872	Chestnut-avenue.	2 Rooms P.	Bowditch.	3d " 2 "	Monument sq., Chsn.	16,350	57,738 95	16,204	1,267,608	50,252 35	0.11	100		
1894	Choate Burnham.	9 Rooms P.	Lincoln.	2d " 2 "	Chestnut ave., J. P.	13,733		1,493				300		
1894	Christopher Columbus.	9 " P.	Lincoln.	2d " 2 "	East Third st., S. B.	17,136	6,277 40	5,896		60,887 10	0.20	450	135 30	
1900	Christopher Gibson.	24 " G.	Christopher Gibson.	1st " 3 Stories.	Tilston st., Dor.	12,558		14,208		114,267 68	0.18	200	146 32	
1871	Church.	4 " P.	Shurtlet.	2d " 2 "	Fst., S. B.	39,420	4,500 00	12,970		111,029 53	0.14	700	158 61	
1856	Comins.	13 Rooms G.	Comins.	2d " 4 "	Tremont st., Rox.	22,169		4,865		33,628 99		300	112 10	
1907	Common Building.											650		
1847	Common-street.	6 Rooms P.	Harvard.	1st " 2 "	Tremont Entrance to the Fenway, Rox.	7,001	7,006 40	9,000			0.23	300		
1852	Cook.	6 " P.	Franklin.	2d " 3 "	Common st., Chsn.	10,170	10,412 50	1,792				300		
1901	Copley.	8 Rooms P.	James Mulcahy.	2d " 2 "	Groton st., Dor.	16,115	38,609 13	6,115		64,776 96	0.22	400	161 94	
1894	Cottage-place.	4 " K.	Comins.	2d " 2 "	Bartlett st., Chsn.	7,094		2,094				200		
1897	Cushman.	16 " P.	Comins.	2d " 4 "	Cottage pl., Rox.	26,714 14		8,360	416,416	71,185 31	0.17	500	129 43	
1880	Cyrus Alger.	8 Rooms P.	Norcross.	2d " 2 "	Parmenter st., Chsn.	16,560	7,088 00	5,600		57,723 27		800	72 15	
1905	Dearborn.	21 " G.	Dearborn.	2d " 3 "	Seventh st., S. B.	37,104		15,392	244,160	48,872 98	0.20	400	122 18	
1852	Dearborn-street.	12 " G.	Dillaway.	2d " 3 "	Amherst st., Rox.	34,460	34,238 10	2,650		860,100	0.13	600	131 62	
1901	Dorchester High.	6 Rooms P.	Mary Hemenway.	3d " 2 "	Kenilworth st., Rox.	77,550		25,857		78,974 16	0.17	200		
1899	Drake.	6 Rooms P.	Norcross.	1st 2d " 3 "	Dorchester st., Dor.	10,260	8,000 00	2,582				300		
1874	Dudley.	14 " G.	Dudley.	2d " 3 "	Talbot ave., Dor.	26,339	8,000 00	12,070		33,872 94		700	112 91	
1870	Dwight.	14 " G.	Dwight.	2d " 4 "	Dudley and Putnam sts., Rox.	19,123	22,925 00	8,531		132,450 95		300	189 26	
1901	East Boston High.	8 Rooms P.	John Lyman Faxon.	1st " 3 "	West Springfield st.	27,500	63,180 27	21,477			0.24	400		
1893	Ellis Mendell.	12 " P.	Mary Hemenway.	2d " 3 "	Marion st., E. B.	10,777		5,673		281,400 57		100		
1894	Ellis Mendell.	12 " P.	George Putnam.	2d " 3 "	Centre st., Dor.	35,491	13,841 49	10,896				600		
1861	Emerson.	6 Rooms P.	Wells.	2d " 3 "	North Beacon st., Dor.	5,924	7,000 00	2,155				300		
1865	Emerson.	16 " G.	Emerson.	2d " 3 "	Poplar st., E. B.	39,952	5,000 00	2,155		101,585 76		300	126 98	
1890	Everett.	14 Rooms G.	Everett.	2d " 4 "	Montgomery st., Dor.	28,000	280,000 00	25,170		431,427 41		700		
1873	Everett.	2 Rooms P.	Thomas Gardner.	3d " 2 "	West Northampton st.	32,409		5,645		53,000 00		700	75 71	
1894	Faraquett.	14 " P.	Martin.	1st 2d " 2 "	Athol st., Bri.	27,923	36,450 00	12,312		652,630	154,149 98	0.24	100	220 21
1892	Farrington-street.	6 " P.	Phillips Brooks.	3d " 2 "	Kenwood rd., Rox.	20,080		3,930				300		
1899	Franklin.	1 " P.	Charles Sumner.	2d " 2 "	Florence st., Rox.	10,439		5,490		40,845 67		300	58 35	
1899	Francis Parkman.	14 Rooms P.	Agassiz.	2d " 2 "	Walsham st., Forest Hills.	30,000	9,000 00	7,013		456,537	121,930 98	0.25	700	174 18
1899	Frederic A. Whitney.	13 " G.	Frederic W. Lincoln.	2d " 5 "	Webster ave., Bri.	18,761	36,356 45	7,058		271,800	47,880 49	0.18	400	119 70
1899	Frederick W. Lincoln.	13 " G.	Frederick W. Lincoln.	2d " 5 "	Broadway, S. B.	24,500		5,620		48,272 18		300		
1868	Freeman.	6 " P.	Freeman.	2d " 3 "	Charter st., Chsn.	5,247	12,099 07	2,100		28,527 62		300	93 76	
1874	Frothingham.	16 Rooms G.	Frothingham.	2d " 3 "	Prospect st., Chsn.	22,079	44,158 00	9,383		78,956 89	0.17	800	98 70	
1872	Frothingham Annex.	2 " P.	Gaston.	3d " 1 Story.	Prospect st., Chsn.	20,784	24,703 70	10,940		33,872 94		100	29 96	
1880	George Putnam.	10 " G.	George Putnam.	2d " 3 Stories.	East Fifth st., S. B.	31,784	13,102 87	7,229		104,104 57	0.19	700	148 72	
1861	George-street.	6 Rooms P.	Hugh O'Brien.	2d " 3 "	Columbus ave., W. R.	18,894		3,045		60,749 05	0.19	300		
1896	Gilbert Stuart.	14 " G.	Gilbert Stuart.	2d " 3 "	George st., Rox.	31,147	13,048 00	9,306				300		
1870	Girls' High.				Richmond st., Dor.	37,480	82,912 31	18,530		605,696	114,059 58	0.19	300	162 94
1907	Girls' Latin.				New Newton st.							300		
1880	Glenway.	2 Rooms P.	Oliver Wendell Holmes.	1st " 3 "	Tremont Entrance to the Fenway, Rox.	7,001	7,006 40	9,000			0.23	600	495 19	
1892	Glenway Annex.	4 " P.	Oliver Wendell Holmes.	2d " 3 Stories.	Glenway st., Dor.	2,194		2,194		3,168 98		100	31 69	
1852	Grant.	4 " P.	Phillips Brooks.	2d " 2 Stories.	Phillips st., Dor.	2,173		2,173		2,933 87		100	29 34	
1847	Hancock.	14 " G.	Hancock.	2d " 4 "	Phillips st., Dor.	3,744	4,677 50	3,021				200		
1903	Hancock Annex.	2 Rooms P.	Hancock.	2d " 1 Story.	Parmenter st., Chsn.	36,042		6,126				100		
1883	Harbor View-street.	4 " P.	Roger Clap.	2d " 2 Stories.	Parmenter st., Chsn.	27,808		1,781		7,247 29		100	72 47	
1893	Harvard.	16 " G.	Harvard.	2d " 3 "	Harbor View st., Dor.	20,000		2,000		125,440	15,632 64	0.12	450	75 16
1871	Harvard.	16 " G.	Harvard.	2d " 3 "	Devens st., Chsn.	16,306		8,652				400		
1848	Harvard.	4 Rooms P.	Thomas Gardner.	3d " 2 "	North Harvard st., Bri.	20,750		2,400				200		
1800	Harvard Hill.	8 " P.	Harvard.	2d " 3 "	Harvard st., Chsn.	4,645		3,300				400		
1823	Hawes Hall.	8 " P.	Bigelow.	2d " 3 "	Broadway, S. B.	16,647	123 22	4,400				100		
1857	Heath-street.	2 " P.	Jefferson.	3d " 2 "	Heath st., Chsn.	10,669		1,105				600		
1891	Henry L. Pierce.	12 Rooms P.	Henry L. Pierce.	2d " 3 "	Washington st., Dor.	64,430	13,268 40	14,630		768,320	118,094 03	0.15	600	196 82
1891	Hillside.	6 " P.	Robert S. Shaw.	2d " 3 "	Elm st., J. P.	21,000	2,703 75	3,716		29,835 23	0.17	200	149 18	
1854	Hobart-street.	2 " P.	Bennett.	3d " 1 Story.	Elm st., J. P.	18,613		2,614		60,856 99	0.10	100	60 86	
1890	Horace Mann.	8 " S.	Phillips Brooks.	2d " 3 Stories.	Hobart st., Bri.	35,973	7,343 93	5,673				300		
1882	Howard-avenue.	6 Rooms P.	Phillips Brooks.	2d " 1 Story.	Newbury st., Dor.	8,400		5,100		87,471 42	0.42	300	136 66	
1887	Hugh O'Brien.	14 " G.	Hugh O'Brien.	2d " 3 Stories.	Howard ave., Dor.	12,685 65		1,000		40,997 17	0.20	300	136 66	



ANNUAL REPORT

OF THE

SINKING FUNDS DEPARTMENT

FOR THE YEAR 1908-1909.

BOARD OF COMMISSIONERS OF SINKING FUNDS,
CITY HALL, May 3, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,—The Board of Commissioners of Sinking Funds have the honor of presenting the following report, showing the transactions during the year ending January 31, 1909.

Amount of cash in treasury January 31, 1908,	\$1,078,533 10	
Receipts during the year	3,757,217 35	
	\$4,835,750 45	
Payments during the year	1,621,546 89	
Amount of cash January 31, 1909	\$3,214,203 56	
Total amount of investments		
January 31, 1908	\$30,656,230 00	
Investments purchased during the year	1,309,000 00	
Carried forward	\$31,965,230 00	\$3,214,203 56

<i>Brought forward</i> . . .	\$31,965,230 00	\$3,214,203 56
Investments matured and cancelled during the year,	325,000 00	
		31,640,230 00
Amount of funds January 31, 1909 . . .		\$34,854,433 56

With this report will be found the report of the Treasurer showing debt and funds, also the report of the examiner.

Respectfully submitted,

NATHANIEL J. RUST,
Chairman.

BOSTON, February 1, 1909.

To the Board of Commissioners of Sinking Funds of the City of Boston:

GENTLEMEN,—The undersigned herewith presents his annual report as Treasurer of the Board of Commissioners of Sinking Funds for the financial year 1908–09.

Balance of cash January 31, 1908.....			\$1,078,533 10
Receipts in 1908–09:			
Appropriation for debt.....	\$1,547,258 00		
Interest on bank deposits.....	43,485 38		
Interest on investments.....	1,125,852 84		
Investments cancelled.....	272,000 00		
Investments matured.....	53,000 00		
Premium on loans negotiated.....	284,583 60		
Revenue from betterments, assess- ments, etc.....	431,037 53		
			3,757,217 35
			\$4,835,750 45
Paid in 1908–09:			
City Treasurer:			
Cancellation of debt.....	\$272,000 00		
Redemption of debt.....	46,000 00		
		\$318,000 00	
Investments purchased.....		1,287,475 00	
Interest on investments purchased...		12,686 04	
Premium on investments purchased..		3,385 85	
			1,621,546 89
Balance of cash January 31, 1909...			\$3,214,203 56

DEBT LIABILITIES OF THE SINKING FUNDS
JANUARY 31, 1909.

CLASSIFICATION OF DEBT.	Liabilities. Jan. 31, 1908.	Debt Issued. 1908-09.	Debt Paid, 1908-09.	Liabilities, Jan. 31, 1909.
Atlantic Avenue Extension...	\$289,000 00	\$8,900 00	.....	\$297,900 00
Blue Hill and Other Avenues..	2,260,000 00	.....	.....	2,260,000 00
Cambridge Bridge.....	1,349,000 00	1,800 00	.....	1,350,800 00
Charles River Basin.....	800,000 00	.....	.....	800,000 00
Fifteen Year.....	1,300,000 00	.....	.....	1,300,000 00
Highways, Making of, No. 1..	4,093,201 00	.....	.....	4,093,201 00
Highways, Making of, No. 2..	7,127,000 00	.....	.....	7,127,000 00
Improved Sewerage, Special..	500,000 00	.....	.....	500,000 00
New Ferry Landing.....	500,000 00	.....	.....	500,000 00
New Public Library, Special..	610,000 00	.....	.....	610,000 00
Public Park.....	5,446,410 98	35,000 00	.....	5,481,410 98
Public Park, Special.....	10,852,500 00	.....	.....	10,852,500 00
Rapid Transit Debts:				
Rapid Transit.....	4,416,000 00	.....	.....	4,416,000 00
Boston Tunnel and Subway,	5,956,700 00	2,000,000 00	.....	7,956,700 00
East Boston Tunnel.....	3,193,000 00	.....	.....	3,193,000 00
Charlestown Bridge, No. 1,	750,000 00	.....	.....	750,000 00
Charlestown Bridge, No. 2,	805,000 00	.....	.....	805,000 00
Riverbank Subway.....	5,000 00	.....	.....	5,000 00
Schoolhouses, No. 1.....	505,000 00	250,000 00	.....	755,000 00
Schoolhouses, No. 2.....	12,859,525 00	750,000 00	\$36,000 00	13,573,525 00
Separate Systems of Drainage, No. 1.....	2,900,000 00	400,000 00	.....	3,300,000 00
Separate Systems of Drainage, No. 2.....	.....	255,000 00	.....	255,000 00
Sewerage Loan, No. 1.....	8,449,000 00	.....	.....	8,449,000 00
Sewerage Loan, No. 2.....	.....	300,000 00	.....	300,000 00
Stony Brook Improvement...	1,034,000 00	.....	.....	1,034,000 00
Ten Year.....	210,500 00	.....	.....	210,500 00
Twenty Year.....	18,332,369 02	398,000 00	.....	18,730,369 02
Thirty Year, No. 1.....	448,000 00	.....	.....	448,000 00
Thirty Year, No. 2.....	1,167,000 00	100,000 00	.....	1,267,000 00
Suffolk County Courthouse...	2,921,000 00	.....	.....	2,921,000 00
Cochituate Water.....	4,531,500 00	.....	282,000 00	4,249,500 00
Totals.....	\$103,610,706 00	\$4,498,700 00	\$318,000 00	\$107,791,406 00

RESOURCES OF THE SINKING FUNDS JANUARY 31, 1909.

NAME OF SINKING FUND.	Cash.	Investments.	Total Resources.
Atlantic Avenue Extension.....	\$44,304 66	\$277,000 00	\$321,304 66
Blue Hill and Other Avenues.....	88,148 22	847,100 00	935,248 22
Cambridge Bridge.....	2,293 86	155,050 00	157,343 86
Charles River Basin.....	3,480 54	59,000 00	62,480 54
Fifteen Year.....	26,374 97	97,500 00	123,874 97
Highways, Making of, No. 1.....	116,641 27	760,200 00	876,841 27
Highways, Making of, No. 2.....	116,227 43	2,008,000 00	2,124,227 43
Improved Sewerage, Special.....	24,920 47	321,000 00	345,920 47
New Ferry Landing.....	39,401 35	190,500 00	229,901 35
New Public Library, Special.....	16,333 22	402,600 00	418,933 22
Public Park.....	159,489 61	2,492,800 00	2,652,289 61
Public Park, Special.....	234,339 49	4,296,000 00	4,530,339 49
Rapid Transit:			
Rapid Transit.....	188,829 25	940,000 00	1,128,829 25
Boston Tunnel and Subway.....	45,461 81	222,300 00	267,761 81
East Boston Tunnel.....	114,557 59	125,000 00	239,557 59
Charlestown Bridge, No. 1.....	17,427 54	143,000 00	160,427 54
Charlestown Bridge, No. 2.....	25,013 82	165,600 00	190,613 82
Schoolhouses, No. 1.....	35,303 88	93,000 00	128,303 88
Schoolhouses, No. 2.....	81,334 53	2,646,500 00	2,727,834 53
Separate Systems of Drainage, No. 1..	83,044 16	105,000 00	188,044 16
Separate Systems of Drainage, No. 2..	3,778 39	13,000 00	16,778 39
Sewerage Loan, No. 1.....	309,395 99	1,846,000 00	2,155,395 99
Sewerage Loan, No. 2.....	796 06	19,000 00	19,796 06
Stony Brook Improvement.....	34,480 33	365,400 00	399,880 33
Ten Year.....	153,486 01	61,000 00	214,486 01
Twenty Year.....	1,025,722 01	8,152,080 00	9,177,802 01
Thirty Year, No. 1.....	17,609 32	107,600 00	125,209 32
Thirty Year, No. 2.....	41,583 99	56,000 00	97,583 99
Suffolk County Courthouse.....	101,967 08	1,097,500 00	1,199,467 08
Cochituate Water.....	62,456 71	3,575,500 00	3,637,956 71
Total Resources January 31, 1909.	\$3,214,203 56	\$31,640,230 00	\$34,854,433 56

CASH ON DEPOSIT IN NATIONAL BANKS AND TRUST COMPANIES.

NATIONAL BANKS.		
Atlantic National Bank.....	\$52,630 62	
Boylston National Bank.....	34,338 43	
Commercial National Bank.....	51,501 40	
Eliot National Bank.....	42,858 93	
Faneuil Hall National Bank.....	55,626 52	
First National Bank.....	185,343 05	
First Ward National Bank.....	31,788 77	
Fourth National Bank.....	53,479 95	
Metropolitan National Bank.....	64,116 12	
National Bank of Commerce.....	158,103 31	
“ Market Bank of Brighton.....	27,223 49	
“ Rockland Bank.....	54,848 12	
“ Security Bank.....	27,558 15	
“ Union Bank.....	106,643 57	
New England National Bank.....	110,590 12	
Old Boston National Bank.....	120,774 11	
Peoples National Bank.....	51,359 42	
Second National Bank.....	175,347 23	
South End National Bank.....	10,016 44	
State National Bank.....	172,249 31	
Webster and Atlas National Bank.....	82,906 88	
Winthrop National Bank.....	53,548 43	
Merchants National Bank.....	74,229 32	
		\$1,797,081 69
TRUST COMPANIES.		
American Trust Company.....	\$121,385 54	
Bay State Trust Company.....	59,694 23	
Beacon Trust Company.....	35,526 57	
Boston Safe Deposit and Trust Company.	184,417 37	
City Trust Company.....	130,772 68	
Columbia Trust Company.....	15,552 63	
Commonwealth Trust Company.....	100,841 42	
Federal Trust Company.....	107,140 14	
International Trust Company.....	100,914 00	
Mattapan Deposit and Trust Company.....	26,243 96	
Mechanics Trust Company.....	41,240 25	
New England Trust Company.....	146,255 29	
Old Colony Trust Company.....	172,029 39	
Puritan Trust Company.....	20,254 83	
State Street Trust Company.....	85,883 64	
United States Trust Company.....	68,969 93	
		1,417,121 87
Total Deposits January 31, 1909.....		<u>\$3,214,203 56</u>

STATEMENT OF CASH AND INVESTMENTS FOR FINANCIAL
YEAR 1908-09.

Total cash resources January 31, 1909.....		\$3,214,203 56	
Investments January 31, 1909:			
City of Boston 4% Bonds.....	\$11,719,650 00		
" " 3½% " 	14,913,680 00		
" " 3¼% " 	29,000 00		
" " 3% " 	3,511,900 00		
County of Suffolk 4% Bonds.....	497,000 00		
" " 3½% " 	10,000 00		
" " 3% " 	459,000 00		
Commonwealth of Massachusetts 3½% Bonds.....	500,000 00	31,640,230 00	
			\$34,854,433 56
			<u>\$34,854,433 56</u>

INVESTMENT ACCOUNT.

Amount of investments January 31, 1908.....		\$30,656,230 00	
Purchased in 1908-09:			
City of Boston 4% Bonds.....	\$163,000 00		
" " 3½% " 	363,000 00		
Cochituate Water 4½% Bonds.....	148,000 00		
" " 4% " 	123,000 00		
" " 3½% " 	1,000 00		
County of Suffolk 4% Bonds.....	1,000 00		
" " 3½% " 	10,000 00		
Commonwealth of Massachusetts 3½% Bonds.....	500,000 00	1,309,000 00	
			\$31,965,230 00
Matured and cancelled in 1908-09:			
City of Boston 3½% Bonds.....	\$36,000 00		
Cochituate Water 4% Bonds.....	123,000 00		
" " 4½% " 	148,000 00		
" " 3½% " 	1,000 00		
County of Suffolk 3% Bonds.....	17,000 00	\$325,000 00	
			325,000 00
Amount of investments Jan. 31, 1909.....			<u>\$31,640,230 00</u>

INCREASE OR DECREASE OF SINKING FUNDS FOR FINANCIAL
YEAR 1908-09.

Amount of Sinking Funds January 31, 1908....			\$31,734,763 10
Increase:			
Appreciation of investments.....		\$21,525 00	
Appropriation for debt.....		1,547,258 00	
Interest in bank deposits.....		43,485 38	
Interest on investments.....		1,125,852 84	
Premium on loans negotiated.....		284,583 60	
Revenue from betterments, assessments, etc..		431,037 53	
			3,453,742 35
			\$35,188,505 45
Decrease:			
City Treasurer:			
Cancellation of debt.....	\$272,000 00		
Redemption of debt.....	46,000 00		
		\$318,000 00	
Interest on investments purchased.....	\$12,686 04		
Premium on investments purchased.....	3,385 85		
		16,071 89	
			334,071 89
Amount of Sinking Funds January 31, 1909....			\$34,854,433 56

Respectfully submitted,
CHARLES H. SLATTERY,
Treasurer.

The Committee on Annual Report of the Treasurer of this Board, appointed to examine the investments of the Sinking Funds, having completed its examination, report that they find the amount of bonds as stated by the Treasurer, viz., \$31,640,230, is correct.

NATHANIEL J. RUST.
J. H. O'NEIL.
JAMES T. WETHERALD.

BOARD OF COMMISSIONERS OF SINKING FUNDS,

January 31, 1909.

Nathaniel J. Rust, <i>Chairman</i>	.	Term expires May 1, 1910
Israel A. Ratshesky	.	Term expires May 1, 1910
Joseph H. O'Neil	.	Term expires May 1, 1911
Horatio G. Curtis	.	Term expires May 1, 1911
Frank G. Webster	.	Term expires May 1, 1909
James T. Wetherald	.	Term expires May 1, 1909

J. ALFRED MITCHELL, *Secretary*.
CHARLES H. SLATTERY, *Treasurer*.

AUDITOR'S CERTIFICATE.

28 STATE STREET, BOSTON, April 29, 1909.

To the Board of Commissioners of Sinking Funds of the City of Boston:

GENTLEMEN,— By your request I made the annual examination of the books and accounting matters of the Treasurer of your Board for the fiscal year which ended with the thirty-first day of January, 1909, and have the honor to report to you as follows:

REPORT.

I inspected carefully the entries of all transactions for the period audited, and reviewed in detail all the clerical work performed,— such as additions, postings and verification of balances. Finally, I traced all results into the balance sheet of the thirty-first day of January, 1909, which is a true abstract from the ledger.

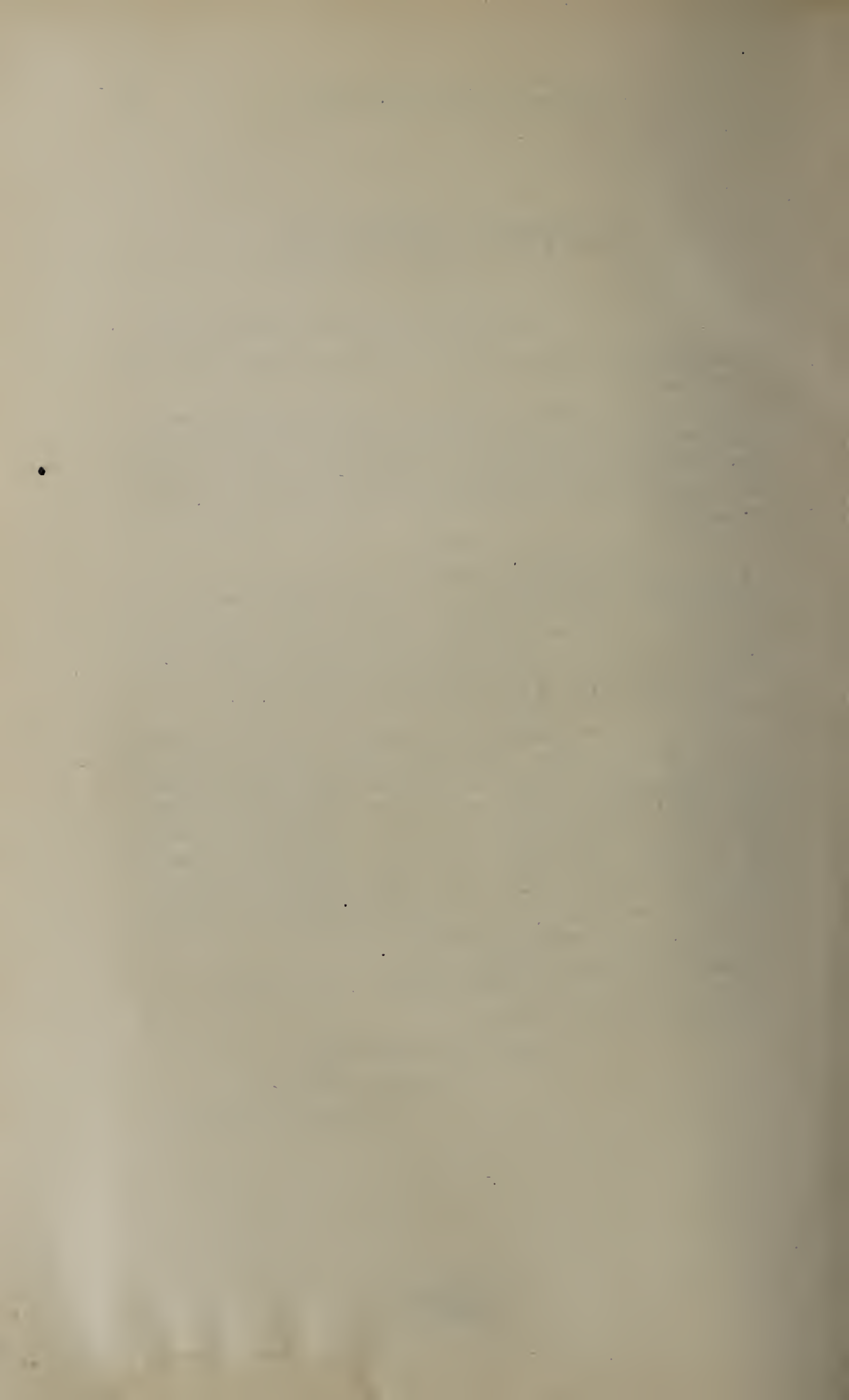
I verified the correctness of the amounts of cash, belonging to the different funds, deposited in the various banks and trust companies of the city, the total of which was, on April 8, 1909, \$2,514,201.92; and furthermore, examined thoroughly the Treasurer's annual report to you — under date of February 1, 1909 — and certify that the statements contained therein as to the receipts and disbursements of cash, the amounts of investments and the debt liabilities and resources of the Sinking Funds, are true in all particulars, to the best of my knowledge and belief.

The books and accounting affairs of the Board are in admirable shape in every way.

Yours very respectfully,

ANDREW STEWART,

Examiner of Accounts.





ANNUAL REPORT
OF THE
SOLDIERS' RELIEF DEPARTMENT
FOR THE
YEAR ENDING JANUARY 31, 1909.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR, — As required by the Revised Ordinances, I have the honor to submit the annual report of the Soldiers' Relief Department for the year ending January 31, 1909.

DUTIES.

The duties of this department are to receive applications for State Aid, Military Aid and Burials, as provided in chapter 381, Acts of 1904, and for Soldiers' Relief, as provided in chapter 79, sections 18 and 19, of the Revised Laws, to investigate each application as to needs and eligibility, and to report monthly with recommendations to the Soldiers' Relief Committee of the Board of Aldermen.

APPLICATIONS.

Persons desiring assistance under any of the above mentioned laws are required to apply in person at this office, except in cases of physical disability, when an agent of this department visits them at their homes, makes all necessary investigations, takes their sworn statements and fills out the required blanks.

All applications of persons not in need, or disqualified by reason of noncompliance with existing laws, are rejected, and the applicants notified of such action, with reasons therefor.

All applicants for State Aid and Military Aid, who are found to be legally entitled to the same, and to be in need thereof, are referred, with recommendations, to the State Aid Commissioner at the State House, who has practically absolute power to name the amount to be allowed.

All recommendations for Soldiers' Relief are presented by the Soldiers' Relief Commissioner each month to the Soldiers' Relief Committee of the Board of Aldermen; who have full power to approve the sum recommended or to allow another sum. Said committee has control of all allowances made under this law.

The Soldiers' Relief Committee for 1908 was composed of Aldermen Louis M. Clark (chairman), Ellery H. Clark and Michael J. Leary, whose courtesy to me, and whose humane consideration of the necessities of the applicants appearing before them are deeply appreciated, and for which I am truly grateful.

The following table shows the number and disposition of applications during the past year, together with the totals of the preceding year for the purpose of comparison:

	Soldiers.	Wives.	Widows.	Children.	Mothers.	Fathers.	Sister.	Total.	Total Preced- ing Year.
Applications.....	856	47	495	9	14	2	1	1,424	1,209
Accepted.....	565	24	340	3	3	.....	.....	935	798
Rejected.....	286	23	155	6	11	2	1	484	397
Pending.....	5	.....	.....	.....	.....	.....	.....	5	14
Totals.....	856	47	495	9	14	2	1	1,424	1,209

VISITATIONS.

Under section 15, chapter 381, Acts of 1904, the recipients of State and Military Aid are required to be visited by the officials of this department, as often as is practicable, for the purpose of keeping informed of any change in their condition.

The completion of the new and comprehensive card index, on which the clerks have been working for some time, made it possible for more visits to be made the past year than in the year preceding, and recent changes in the system of clerical work in this office will permit of still more visits during the

coming year, so that it may be possible to show in the next annual report of this department that each beneficiary was visited at least once during the year by an official visitor. One thousand two hundred and ninety-one visits have been made during the past year.

These visits are important in determining the varying needs of the beneficiaries, and occasionally result in the discontinuance of aid because of their improved conditions.

STATE AID.

Chapter 381, Section 3, Acts of 1904.

On May 23, 1861, the first State Aid law was enacted by the Massachusetts Legislature, being chapter 222 of the Acts of that year. It has been re-enacted usually every five years since that date.

It is applicable only to soldiers who served to the credit of Massachusetts in the Civil War and the War with Spain, to certain of the wives, widows, fathers and mothers of such soldiers, and to army nurses of the Civil War.

A maximum of \$6 per month is paid to the soldiers and \$4 per month to their dependents.

Recommendations under this law are made by the Soldiers' Relief Commissioner to the State Aid Commissioner, and, if approved by him, are referred to the Soldiers' Relief Committee for concurrence.

All sums expended by this department under this law are reimbursed to the city by the Commonwealth on the first day of December following the year in which they were paid.

The following tables show the changes among the beneficiaries during the year and the disbursements for the same period.

Pensioners of the War of the Rebellion Cases.

CHAPTER 381, SECTION 3, ACTS OF 1904.	Soldiers.	Wives.	Widows.	Mothers.	Army Nurses.	Total.	Total Preced- ing Year.
Number on roll January 31, 1908.....	679	90	975	12	1	1,757	1,808
Added during the year.....	256	5	143	1	.....	405	265
Dropped during the year.....	193	10	140	5	.....	348	316
Number on roll January 31, 1909.....	742	85	978	8	1	1,814	1,757

Whole number aided during the year, 2,162.
Whole number aided during the preceding year, 2,073.
Amount disbursed, \$112,559.81.

Pensioners of the War with Spain Cases.

CHAPTER 381, SECTION 3, ACTS OF 1904.	Soldiers.	Widows.	Children.	Mothers.	Fathers.	Total.	Total Preced- ing Year.
Number on roll January 31, 1908.....	12	10	5	9	2	38	29
Added during the year.....	8	1	.....	.....	.....	9	16
Dropped during the year.....	9	.....	.....	.....	.....	9	7
Number on roll January 31, 1909.....	11	11	5	9	2	38	38

Whole number aided during the year, 47.

Whole number aided during the preceding year, 45.

Amount disbursed, \$1,725.

Consolidated Table of Pensioners of War of Rebellion and of War with Spain Cases.

CHAPTER 381, SECTION 3, ACTS OF 1904.	Soldiers.	Wives.	Widows.	Mothers.	Army Nurses.	Fathers.	Children.	Total.	Total Preced- ing Year.
Number on roll January 31, 1908.	691	91	984	21	1	2	5	1,795	1,837
Added during the year.....	264	5	144	1	.....	.....	.....	414	281
Dropped during the year.....	202	10	140	5	.....	.....	.....	357	323
Number on roll January 31, 1909..	753	86	988	17	1	2	5	1,852	1,795

Whole number aided during the year, 2,209.

Whole number aided during preceding year, 2,118.

Whole amount disbursed, \$114,284.81.

MILITARY AID.

Chapter 381, Sections 9 to 11, Acts of 1904.

Military Aid is unlimited in amount and is paid only to Massachusetts soldiers of the War of the Rebellion and the War with Spain, and *not* to their dependents, nor to soldiers of other states.

Applicants are eligible to this aid in cases where their combined pension and State Aid are insufficient for their proper support.

After their eligibility and needs are proven by investigation, they are referred to the State Aid Commissioner with the recommendation of the Soldiers' Relief Commissioner.

The approved cases are then submitted to the Soldiers' Relief Committee for concurrence, at the monthly meeting of said committee.

As this form of aid is payable to men only, and chiefly to those having a legal settlement in Boston, the total amount paid is necessarily limited.

One-half of this aid paid to persons having a legal settlement in Boston and all of the aid paid to state cases are reimbursed to the city by the state on December first of the year following that in which the payments were made.

In the following table are shown the changes among the beneficiaries during the year and the disbursements for the same period:

CHAPTER 381, SECTIONS 9 to 11, ACTS OF 1904.	War of the Rebellion.	War with Spain.	Total.	Total Preceding Year.
Number on roll January 31, 1908	103	19	122	136
Added during the year	11	69	80	61
Dropped during the year	26	53	79	75
Number on roll January 31, 1909.	88	35	123	122

Whole number aided during the year:				
War of Rebellion	114	cases, costing		\$10,177 77
War with Spain	88	" "		5,914 30
Total	202	" "		\$16,092 07

Whole number aided preceding year:				
War of Rebellion	147	cases.		
War with Spain	50	"		
Total	197	"		

SOLDIERS' RELIEF.

Chapter 79, Section 18, Revised Laws.

The origin of this law was the discovery that large numbers of aged and infirm veterans of the War of the Rebellion, and their dependents, were being supported as paupers in city and town almshouses.

The great heart of an appreciative public revolted at such lack of recognition of the services of the nation's defenders, and a petition was presented to the Legislature asking for the passage of a law which would provide for their removal from the almshouses, and for their proper support in their homes, and for their complete separation from the pauper class. The response of the Legislature was most favorable

and prompt, resulting in the passage of chapter 438 of the Acts of 1888, since incorporated into chapter 79 of the Revised Laws.

Applicants for relief under this law must be in necessitous circumstances and have a legal settlement in Boston, and the soldier upon whose military or naval service the claim is based must have served in the War of the Rebellion from any state, and be in receipt of an honorable discharge from all enlistments, and he must have acquired a legal settlement in this Commonwealth subsequent to May 1, 1860.

Very naturally all expenses under this law come from the City Treasury, with no reimbursement, all the persons relieved being legally settled citizens of Boston. Of the beneficiaries under this law, many have no claim to State or Military Aid, not having served to the credit of Massachusetts.

Applications are received and investigated as in cases of State Aid, and, if warranted by the circumstances, the Soldiers' Relief Commissioner presents his recommendations to the Soldiers' Relief Committee of the Board of Aldermen at each monthly meeting of said committee, together with a typewritten schedule for each member of the committee containing a condensed account of each case with the reasons for the recommendations.

At these monthly meetings, the Soldiers' Relief Commissioner explains to the committee the details of each case and the laws governing the distribution of relief, and the committee has power to increase or decrease the sum recommended, or to reject the application.

Such of the applicants as are able to be present at these meetings are notified to attend, and are personally examined by the committee whenever, in their judgment, it is necessary.

All cases approved by the committee are presented to the Board of Aldermen for authorization to pay the amounts allowed.

The Acts of 1908, chapter 405, amending the State Aid law so as to include soldiers' widows who were married previous to June 27, 1890 (formerly April 9, 1880), resulted most favorably to the City of Boston, as seventy-seven widows were added to the State Aid roll at \$4 per month each, and stricken from the Soldiers' Relief roll for the same amount, an annual saving to the city of \$3,696.

In the following table are shown all changes and payments under the Soldiers' Relief law:

CHAPTER 79, SECTION 18, REVISED LAWS.	Soldiers.	Wives.	Widows.	Fathers.	Mothers.	Children.	Army Nurses.	Total.
Number on roll January 31, 1908...	172	69	567	.....	15	10	1	834
Added during the year.....	51	6	56	.....	.....	.....	.....	113
Dropped during the year.....	58	2	75	.....	3	2	.....	140
Number on roll January 31, 1909...	165	73	548	.....	12	8	1	807

Whole number aided during the year, 947.

Whole number aided during the preceding year, 969.

Amount disbursed, \$96,043.22.

ACTUAL NUMBER AIDED.

In order to obtain for the city the largest reimbursement from the Commonwealth, special effort is made to secure State and Military Aid for all who may be in need thereof, and entitled thereto, but even then the aid secured is insufficient for the support of the beneficiary and the necessary balance is supplied in the form of Soldiers' Relief. For this reason there are unavoidable duplications of persons in the foregoing tables.

The exact number of individual beneficiaries relieved during the year, together with all changes connected therewith, are shown in the following table:

Actual Number of Individual Persons Relieved by the Department During the Year 1908.	Soldiers.	Wives.	Widows.	Fathers.	Mothers.	Children.	Army Nurses.	Total.
Number on roll January 31, 1908	921	173	1,284	3	25	23	1	2,430
Added during the year.....	339	11	305	.....	4	.....	.....	659
Dropped during the year.....	228	73	146	.....	5	10	.....	462
Number on roll January 31, 1909	1,032	111	1,443	3	24	13	1	2,627

Whole number of individual persons aided during the year, 3,089.

Whole number of individual persons aided during the preceding year, 2,858.

BURIALS.

Section 17, Chapter 381, Acts of 1904.

This law provides for the payment of \$35 by the city for the burial, in places not used for the interment of paupers, of

needy veterans of the War of the Rebellion and the War with Spain, certain of their dependents, and army nurses of the War of the Rebellion.

All expenditures under this law are reimbursed by the Commonwealth.

The execution of the law is intrusted to Capt. Charles A. Feyhl of No. 60 Pemberton square, the regularly appointed burial agent for the City of Boston.

The number of burials during the year and the expense thereof are shown in the following table:

CHAPTER 381, SECTION 17, ACTS OF 1904.	Soldiers.	Wives.	Widows.	Mothers.	Army Nurses.	Total.
Number.....	119	3	49	4	.....	175
Amount.....	\$4,153 46	\$105 00	\$1,715 00	\$140 00	.....	\$6,113 46

DEATHS.

The deaths among the beneficiaries of this department during the past year are as follows:

Soldiers.	Wives.	Widows.	Mothers.	Fathers.	Children.	Army Nurses.	Total.	Total Preced- ing Year.
78	4	51	2	.....	.....	.....	135	139

LOCATIONS OF BENEFICIARIES.

Because of the liability of the city to relieve veterans and their dependents residing in other cities and towns in the state, but having their legal settlements in Boston, quite a number are nonresidents, as will appear in the following table:

	Soldiers.	Wives.	Widows.	Fathers.	Mothers.	Children.	Army Nurses.	Total.
Beneficiaries residing in Boston.....	988	98	1,356	3	24	11	1	2,481
Beneficiaries residing outside of Boston..	26	10	71	.....	.....	2	.....	109
Beneficiaries supported in institutions..	18	3	16	.....	.....	.....	.....	37

ADDITIONAL VOLUNTARY SERVICE.

Recognizing the heavy burden imposed upon the city by the support of so many needy veterans, and realizing that by the entrance of beneficiaries into Soldiers' Homes their own condition would be improved and the city relieved from the cost of their support, every effort has been made by this department to induce such as had no family ties, or whose environment was undesirable, to enter said homes, with the result that admission was secured for nine into the Soldiers' Home in Chelsea, and for fourteen into the National Soldiers' Home in Togus, Maine.

In the examination of applicants for relief it is often found that, while they have no claim on Boston, they have a claim on some other city or town in Massachusetts, by reason of having a legal settlement therein. In such cases the department does not consider its whole duty done by rejecting the applications. On the contrary, every effort is made, by advice and instructions, and by correspondence and evidence, to secure from the proper place the relief so much needed by the applicant. During the year we have executed pension vouchers at the homes of our sick beneficiaries without charge to them. Many have been furnished with temporary assistance and with transportation to different points, thus obviating the necessity of entering their names on our pay roll, whence it is always more or less difficult to remove them.

The Superintendent of Public Buildings has been of great assistance to this department by permitting us to use his ambulance for the conveyance of sick and disabled veterans to the Soldiers' Home in Chelsea, and to other places, for which courtesy we assure him of our most cordial appreciation.

The expense of maintaining the department and of relieving the wants of the beneficiaries is shown in the following table:

FINANCIAL STATEMENT.

Regular appropriation	\$254,000 00
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Expenses.

Chapter 381, section 3, Acts of 1904, to 2,209 persons .	\$114,284 81
Chapter 381, section 9, Acts of 1904, to 202 persons .	16,092 07
Chapter 381, section 17, Acts of 1904, to 175 persons .	6,463 46
Chapter 79, section 18, Revised Laws, to 947 persons .	96,043 22

<i>Carried forward</i>	\$232,883 56
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Brought forward	\$232,883 56	
Salaries.		
John E. Gilman, Commissioner	\$3,500 00	
Clerks	10,516 00	
		14,016 00
Office Expenses.		
Printing	\$183 88	
Stationery and postage	193 54	
Premium on surety bonds	52 00	
Five visitors' bags	22 25	
Traveling and incidentals	152 00	
Telephone	156 47	
		760 14
Total expenses		<u>\$247,659 70</u>

There was received from the Commonwealth of Massachusetts as follows:

Receipts.		
Chapter 381, section 3, Acts of 1904	\$114,493 00	
Chapter 381, section 9, Acts of 1904	10,789 28	
Chapter 381, section 17, Acts of 1904	7,760 00	
		<u>\$133,042 28</u>
Total expenses	\$247,659 70	
Total receipts	133,042 28	
Net cost to city		<u>\$114,617 42</u>

Very respectfully,

J. E. GILMAN,
Soldiers' Relief Commissioner.

[DOCUMENT 37 — 1909.]



ANNUAL REPORT
OF THE
STATISTICS DEPARTMENT
FOR THE YEAR 1908-1909.

Boston, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— We have the honor to submit the following report of the work of this department for the year ending January 31, 1909.

The Board of Aldermen on May 4, 1908, confirmed your Honor's appointment of Mr. F. Spencer Baldwin to serve as Statistics Trustee for the term ending April 3, 1913.

On November 11, 1908, Mr. Laurence Minot, who had served as chairman of the Board since its original organization in 1897, resigned.

On November 13, 1908, Mr. B. Rodman Weld, who had served continuously as a member of the Board since 1897, was elected chairman to succeed Mr. Minot.

On November 15, 1908, Mr. Fred H. Lawton, statistical clerk, resigned to accept a better paid post in the service of the United States.

Our office force now consists of a secretary, an editorial clerk and a stenographer.

SPECIAL PUBLICATIONS, No. 15.

In our series of Special Publications entitled "*Receipts and Expenditures of Ordinary Revenue*" this number is the twelfth,

and it covers the five years 1903-07, giving a complete comparative analysis of this class of the City's financial transactions, and showing in detail how the annual appropriation for each municipal department was expended in each of those years, the latter arranged side by side. There is also an appendix of 23 pages, showing the other three classes of the City's accounts, viz.: *extraordinary*, *trust funds* and *book-keeping items*, all of which are grouped with the *ordinary* in tables covering the same five-year period, the Suffolk County accounts being separated from those of Boston. Besides these single-page tables showing "*Analysis of Receipts by Sources of Income*" and "*Summary of Receipts and Expenditures*" for each year, there is a ten-page table in which the four classes of accounts for the fiscal year 1907-08 are analyzed according to the "Uniform System" of the National Municipal League.

The actual receipts of the City (viz., the total of ordinary and extraordinary receipts) in the fiscal year 1907-08 amounted to \$32,893,734, a decrease from the previous year's total of \$1,478,244, or 4.30 per cent. The decrease is partly explained by the difference in the aggregate of loans, viz., \$672,700 smaller in 1907-08 than in 1906-07, and partly by the unexpected shortage in tax collections, *i. e.*, \$800,000 approximately.

The actual expenditures (ordinary and extraordinary) for 1907-08 amounted to \$34,051,353, or \$248,548 less than in the year preceding.

In the ten years 1897-1906 the actual receipts of the city (ordinary and extraordinary) ranged between \$27,178,217 in 1900-01 and \$34,615,577 in 1905-06, showing a yearly average of \$31,111,661, or \$1,782,073 less than their amount in 1907-08.

In comparing the actual expenditures (ordinary and extraordinary) it appears that the total for 1907-08 (*i. e.*, \$34,051,353) was \$2,763,290 above the average for the preceding ten years, and \$573,332 higher than the average for the five years preceding.

As to ordinary receipts alone (*i. e.*, excluding receipts from loans, etc.), these amounted to \$26,774,753 in 1907-08, against \$27,060,146 in the year 1906-07. This deficiency of \$285,393 in the ordinary revenue for 1907 was clearly due to deferred tax payments caused by the financial stringency in the business community during the last quarter of that year. Only once during the past fifteen fiscal years of the City has the total ordinary income decreased from one year to the following year, and this was in 1902-03 when the decrease was but

\$50,000 from the preceding year's total. In the ten years 1897-1906 ordinary receipts ranged between \$19,168,862 in 1897 and \$27,060,146 in 1906, showing an average for the decade of \$23,354,787, and for the last five years of \$25,313,493.

Ordinary expenditures alone ranged between \$19,403,169 in 1897 and \$26,688,362 in 1906, their average for the ten years being \$22,932,733, and for the last five years of the decade \$24,827,422.

The three principal objects of expenditure, to the payment of which the ordinary receipts are applied, appear in the following summary:

Ten Years, 1897-1906.

	Total Expenditure.	Average Annual Expenditure.
Debt Requirements.....	\$40,136,288	\$4,013,629
Schools.....	32,063,530	3,206,353
Street Department.....	28,649,787	2,864,978
Totals.....	\$100,849,605	\$10,084,960

The total expenditure for the three specified objects in the ten years, viz., \$100,849,605, was 44 per cent of the aggregate ordinary expenditures for that period.

Comparing the average annual expenditure for the same three objects in the decade, and the latter half of it, with the single year 1907-08, the increase appears as follows:

	10-Year Average, 1897-1906.	5-Year Average, 1902-1906.	1907-1908.
Debt Requirements.....	\$4,013,629	\$4,034,234	\$4,866,184
Schools.....	3,206,353	3,590,571	3,844,845
Street Department.....	2,864,978	3,100,468	3,419,994

In the last five years, 1903-07, ordinary receipts amounted to \$129,767,794, an increase of \$18,381,825, or 16.5 per cent over similar receipts in the preceding five-year period; while extraordinary receipts (loans, etc.) in the five years 1903-07 amounted to \$36,804,977, against \$37,887,949 in the five years previous, a decrease of \$1,082,972, or 2.86 per cent. Taking the loans separately for these two five-year

periods, their amount, 1903 to 1907, inclusive, was \$32,426,000, or \$1,302,831 less than from 1898 to 1902.

As to ordinary expenditures, in the five years 1903-07 their total was \$128,938,520, an increase of \$20,221,570, or 18.6 per cent over the same for the previous five years; while extraordinary expenditures increased from \$39,387,408 in the earlier period to \$41,006,978 in the later, or 4.11 per cent.

The average annual ordinary expenditures for Debt Requirements, Schools and Street Department, for the two five-year periods ending with 1907 and 1902, are as follows:

Average Annual Expenditures — Three Leading Objects.

FIVE-YEAR PERIOD.	Debt Requirements.	Schools.	* Street Department.
1898-1902.....	\$4,023,533	\$2,998,545	\$2,740,217
1903-1907.....	4,287,965	3,686,621	3,204,701

* In the total of Street Department expenditures are included those of the six separate departments into which the Street Department was divided by the ordinance of 1906, also the expenses of the Street Commissioners.

The foregoing comparison shows an increase of ordinary expenditures for Schools in the later five-year period of \$688,076, or 22.95 per cent; for Street Department an increase of \$464,484, or 16.95 per cent; while for Debt Requirements the increase is but \$264,432, or 6.57 per cent.

The grand total of all classes of receipts increased from \$42,246,450 in the fiscal year 1903-04 to \$46,858,533 in 1907-08, or 10.92 per cent; and of all classes of expenditures from \$43,961,141 in 1903-04 to \$47,069,289 in 1907-08, or 7.07 per cent.

MONTHLY BULLETIN.

The final number of this publication for 1908 completed its tenth volume. Owing to the delay of several of the municipal departments in furnishing their data for our regular monthly tabulations, the Bulletin is now issued quarterly, each successive number containing three months' new figures, those of each month shown separately, as hitherto, with totals for the period covered.

In a survey of the twenty-one regular monthly tables for the year 1908 the following noteworthy facts will be found, viz.: Out of 17,042 cases of infectious diseases reported to the Board of Health in 1908, the per cent of deaths was 10.35, while in 1907 the per cent was 16.03 out of 9,940 cases. This is a remarkably favorable showing for 1908 and it has not been

approached in recent years (See p. 135).—The total number of immigrants from Transatlantic ports recorded in Boston for the year 1908 was only 22,992, a decrease of 65.62 per cent from the 1907 total (See p. 143).—On December 1, 1908, the State assumed the care and support of the insane, epileptic and feeble-minded persons previously included in the "Institutions Population" of Boston, thereby decreasing this population about 1,100 (See p. 137).—The records of the Police Department show that 68,636 arrests were made in 1908. This is 11,060, or 19.21 per cent, more than the total for 1907—a remarkable increase. Of all arrests, 62.30 per cent were for drunkenness, and 38.26 per cent were of persons not residents of Boston (See p. 148).—The total number of real estate transfers in 1908 was 8,428, or 294 more than in 1907, the increase being in Dorchester, Roxbury and West Roxbury (See p. 147).—The sanitary inspection and abating of nuisances by the Health Department in 1908 was far more extensive and effectual than in 1907 and previous years, the total number of nuisances stopped being 26,121, or 112.59 per cent more than in 1907 (See p. 146).—According to the Chamber of Commerce records for 1908, the total receipts of anthracite coal in Boston during the year were 1,776,401 tons, or 276,887 tons less than in 1907, and the total of bituminous coal 3,673,638 tons, or 157,998 less than in 1907; the total receipts of flour in Boston for 1908 were 1,959,526 barrels, or 238,111 less than in 1907, and the exports amounted to 812,418 barrels, or 122,698 less than the previous year's total.

There are twenty-four pages of Appendix articles in the 1908 Bulletin and, as these are of special interest, a synopsis of them follows:

Bulletin Nos. 1, 2 and 3, Volume X., March, 1908.

- A. *Population, Valuation, Tax Rate and Indebtedness, also other Taxation Statistics, for the Cities of Massachusetts in 1907.*
- B. *Foreign Commerce of the Principal Ports of United States, 1898 to 1907, inclusive.*

(A.) This four-page exhibit of the financial condition of the thirty-three cities of the State on May 1, 1907, is similar to the comparative showing contained in the Bulletin in previous years.

The rank of Boston as to "Tax Rate" changed from next to lowest to second from lowest, while the rate remained the same as in 1906 (*i. e.*, \$15.90). This was due to a noteworthy

reduction in Beverly's tax rate, *i. e.*, from \$18 to \$14.40, the latter rate being the lowest in the list. As to "Net Debt per Capita," Boston changed from second to highest rank (*i. e.*, from \$106.60 to \$115.23), while regarding "Per Cent of Net Debt to Valuation," ten cities showed a higher percentage than Boston (*i. e.*, 5.34 per cent). In this important category twenty cities showed a decreased percentage from 1906, and twelve cities an increased percentage, the largest reduction being 1.82 per cent (*i. e.*, Medford's), and the largest advance 1.16 per cent (*i. e.*, Woburn's). Boston showed an increase of 0.36 per cent, the net debt being \$70,196,800 in 1907 against \$64,200,117 in the preceding year, while the total assessed valuation rose to \$1,313,471,557 in 1907, an increase of \$23,765,670 from 1906.

The thirty-three cities had twenty-five different tax rates in 1907, the highest being \$20.80 (*i. e.*, Chelsea's) and the lowest \$14.40, as before stated. Fifteen cities showed a higher tax rate than in 1906, the average increase being 60 cents; twelve cities made a reduction averaging 85 cents, and in six there was no change.

These additional facts appear in the other two full-page tables, *viz.*, that Boston's assessed valuation per capita (*i. e.*, \$2,156, approximately) is nearly two and a half times the average shown by the other thirty-two cities, Beverly's ranking next (*i. e.*, \$1,852, approximately) and Newton's third (*i. e.*, \$1,771, approximately), while the remaining thirty cities show per capita figures ranging from \$1,182 (*i. e.*, Springfield's) down to \$532 (*i. e.*, Chicopee's); that Boston's taxes on real and personal estate, aggregating \$20,884,198, represent nearly 36 per cent of all the taxes levied in the 354 municipalities of the State, or somewhat less than four-sevenths of the entire tax levy in the State outside of Boston; that the number of persons assessed on property in Boston was 62,385 in 1907, and 166,898 other persons for poll tax only, the latter number being 72.79 per cent of all the persons assessed, also that the number of resident individuals assessed on property was 41,451, and of non-resident individuals so assessed 5,319.

(B.) This two-page article, compiled from the United States Bureau of Statistics of the Treasury Department and the Department of Commerce and Labor, gives the yearly totals of the value of the imports, exports and entire foreign commerce of the seven principal ports of the country for each of the ten years 1898 to 1907, inclusive, with the percentage of each port to the whole. Boston ranks next to New York in total trade and in imports alone, showing an excess for the decade in total value of imports of \$261,242,243,

as compared with the imports at Philadelphia, the port ranking next to Boston. The annual average of Boston's total trade for the decade was \$187,928,679, while the average of New Orleans, ranking next, was \$163,942,913. Regarding exports alone, Boston's annual average for the decade was \$107,300,459, or less than that of either New Orleans or Galveston, while as to imports alone Boston's average was \$80,628,221, or nearly equal to that of New Orleans and of Philadelphia combined. Boston's imports increased from \$51,475,094 in 1898 to \$123,411,168 in 1907, but the exports decreased from \$117,531,903 in 1898 to \$104,611,089 in 1907.

Bulletin Nos. 4, 5 and 6, Volume X., June, 1908.

Comparative Statistics of Cities, 1905.

This six-page comparative showing of corporate payments for expenses of maintenance of cities having a population of 30,000 or more is a continuation of the subject begun in Volume IX., Nos. 10, 11 and 12. The tables were compiled from the most recent publication of the United States Census Bureau, containing the data for the year 1905, and they show the total and per capita expenses, under seven principal objects, of ten leading cities in the country, nineteen cities in Massachusetts, twelve in New York, sixteen in Pennsylvania, nine in Ohio and ten in the western or Pacific division of states. In a summary showing the cities having the twenty highest per capita averages for total corporate payments, Newton ranks first, or \$40.83; Boston second, or \$35.55; New York third, or \$25.95, and Pueblo, Col., fourth, or \$22.96; while among the per capita payments for school-teachers' salaries, Pueblo, Col., ranks highest, or \$5.14; Newton second, or \$4.71; Spokane, Wash., third, or \$4.56, and Boston fifth, or \$4.50. In another summary showing the twenty highest per capita payments by objects, Boston ranks second for "General Government," or \$3.82; second for "Fire Department," or \$2.27; second for "Highways," or \$3.41; second for "Police Department," or \$3.23; first for "Health and Sanitation," or \$3.12; third for "Interest," or \$3.65, and fifth for "Schools," or \$6.20.

As compared with the leading cities of the country, Boston ranks highest in per capita payments for every principal object except "Police Department," New York standing a trifle higher for that. The wide variance between the rank of the cities as respects population and per capita payments shows that population is not the controlling factor in determining the rank but, rather, the difference in the purchasing

power of money or the varying methods of municipal organization and administration.

Among the 154 cities of the United States having 30,000 or more population those having the seventeen highest per capita averages for total corporate payment are in North Atlantic states (*i. e.*, ten cities, of which five are in Massachusetts) and the far western states (*i. e.*, seven cities).

Table II. of this article shows the distribution, in percentages, by objects of payment, of general and special service expenses for each of the four groups of cities and the nineteen cities of Massachusetts separately. Taking Boston's total annual expenditures as 100 per cent. the distribution for the eight principal objects is as follows: I. General Government, 12.3; II. Protection of Life and Property, 19.2; III. Health and Sanitation, 10.1; IV. Highways, 11.0; V. Charities and Correction, 9.6; VI. Education, 21.6; VII. Recreation, 3.9; VIII. Interest, 11.8, and an unclassified remainder of 0.5 per cent.

Bulletin Nos. 7, 8 and 9, Volume X., September, 1908.

Metropolitan District Financial Statistics.

This six-page article constitutes a special and original study of municipal expenditures, also assessments and net debts incurred for park, water supply and sewer improvements and extensions undertaken by the State in behalf of the cities and towns of the Metropolitan District, all the compilations being made for the year 1906.

Table I. shows the population of the 41 cities and towns included in the park, water and sewerage districts, each separately, according to the census of 1905, the total of which is 1,275,364. Table II. shows, by individual municipalities and groups, the number of persons residing in the Metropolitan District in 1905 who were engaged in gainful pursuits, and the proportion of the same who were reported as "working in Boston" or "working in place of residence." By this showing it appears that of 335,185 persons working in Boston, 73,021, or 21.79 per cent, resided in the Metropolitan District outside of Boston, while of 269,890 persons working in the district outside of Boston, 170,616, or 63.21 per cent, worked in their place of residence and 26,253, or 9.73 per cent, worked elsewhere and outside of Boston.

Table III. shows the total payments from revenue for all departments, and for six principal objects separately, by each of the 30 municipalities situated within ten miles of the State House, in the year 1906. This table was compiled

from the new public document of the Massachusetts Bureau of Statistics of Labor, or the "First Annual Report on the Comparative Financial Statistics of Cities and Towns," and is of unusual interest, since it affords fuller and more specific data regarding the cost of municipal government in the Metropolitan District than have been obtainable hitherto. The total payments from revenue for the district in 1906 were \$45,571,789, of which \$26,883,758 was expended by Boston.

Table IV. shows by municipalities the assessments levied by the Commonwealth in 1906 to meet sinking fund, interest and maintenance dues for the Metropolitan park, water and sewerage systems. The total assessment against the 41 cities and towns in the park system was \$945,366, of which Boston's share was \$620,045; against the 19 in the water system \$2,262,657, of which Boston's share was \$1,822,556; and against the 25 in the sewerage system (*i. e.*, North and South) \$752,861, of which \$226,355 was Boston's share.

Table V. includes the first complete computation of each of the three divisions of the Metropolitan debt, for the cities and towns of the District, to appear in any state or municipal publication. Alongside this analysis of the Metropolitan debt, which is brought down to December 1, 1906, is a column showing the municipal debt of each municipality, another giving the total of the two, and beyond this the per cent of debt to valuation. The total of the Metropolitan District debt is \$57,864,060.09, of which Boston's share is \$38,030,694.58, while the aggregate of Metropolitan and municipal debt for the District is \$160,927,315.12 (*i. e.*, 7.80 per cent of the valuation), of which Boston's share is \$108,240,504.25 (*i. e.*, 8.39 per cent of its valuation), the net debt of Suffolk County being included.

Bulletin Nos. 10, 11 and 12, Volume X., December, 1908.

- A. *Summary Tables for Year 1908.*
- B. *Receipts of Milk in Boston, by Rail, for Year 1908.*
- C. *Borrowing from Municipal Trust Funds.*
- D. *Boston School Census, 1908.*

(A.) Those tables in the Bulletin which are not totalized until the close of the calendar year, because of lack of space or liability to frequent correction, are the long mortality table of the Health Department (*i. e.*, Causes of Death by Sex) and six of the Institutions tables. Special summaries are made for these, occupying three pages of the December appendix. The facts of chief interest found in these summaries are as follows: The total number of deaths in Boston during the year 1908

was 11,767 (including 1,243 non-residents), or 6,211 males and 5,556 females, which total is but 81 in excess of that for the year 1907. The annual death-rate per 1,000 inhabitants was 19.03, against 19.13 in 1907, and if the deaths of non-residents are deducted, the rate is reduced to 17.02. Nearly one-third of all the deaths were of children under five years, *i. e.*, 3,891. The mortality from heart disease was 1,177, from tuberculosis 1,067, and from pneumonia 971, a total from these three principal causes of 3,215, or 27.3 per cent of the total mortality.

The average daily number of inmates in the City Infirmaries during 1908 was 974; in the House of Correction, 1,410; in the Insane Hospital, 782, and in the City Hospital, 801; while the whole number of cases "Cared for" recorded in all Hospitals was 16,315; in Children's Institutions, 3,015; in Penal Institutions, 21,633; Indoor Poor, 34,113; Soldiers and Sailors and dependents, 3,008. The grand total for all "Cared for" cases, *i. e.*, where wholly or partially supported or aided, during the year 1908 was 78,084. This aggregate includes a considerable number of instances (not counted) where payment was made for treatment and board in hospitals and other institutions, but it excludes the cases of aid to approximately 6,000 persons, in 2,000 families, given by the Overseers of the Poor chiefly during the winter months.

(B.) This table, compiled from the monthly returns furnished by the Railroad Commissioners, shows the number of quarts of milk received in Boston each month and quarter for the year 1908, by the Boston & Albany, Boston & Maine, and New York, New Haven & Hartford railroads. The total number of quarts received in the first quarter was 25,252,016; in the second quarter, 27,045,147; in the third, 26,693,036; and in the last, 25,168,142; or a total for the year of 104,158,341 quarts, as against a total of 108,969,947 quarts for the year 1907. The Boston & Maine transported 63 per cent, the New York, New Haven & Hartford 22 per cent and the Boston & Albany 15 per cent of the 1908 total.

(C.) Part IV. of Comparative Financial Statistics of the Cities and Towns of Massachusetts for 1906 is made up of public debt and sinking fund statements, and these include "Trust funds borrowed for municipal purposes" or "for town purposes." Eight cities are shown to be indebted to funds, held by them in trust, to the extent of \$441,488, the amounts thus borrowed ranging from \$107,708 in Fall River to \$12,456 in Marlborough. Thirty-six towns are found to be likewise indebted for an aggregate of \$360,622, in separate sums ranging from \$39,239 in Leominster to \$430 in Phillipston. The

annual reports of the Tax Commissioner have shown that this custom is fairly common among Massachusetts cities and towns. In the case of Salem, it was found necessary to obtain authority by legislative act, in 1903, to issue municipal bonds, in order to fully replenish trust funds amounting to \$95,000, and all borrowing thereafter from such funds was prohibited.

(D.) In this two-page article the results of the latest School Census, by wards, are found. These show that the school population of Boston (*i. e.*, persons 5 to 14 years of age, inclusive) numbered 7,300 more in 1908 than in 1907, or 111,450 in all, of which 54,967, or 49.32 per cent, were boys, and 56,483, or 50.68 per cent, were girls; that 83,494, or 74.92 per cent, were in the public schools; 17,060, or 15.31 per cent, in private schools, and 10,896, or 9.77 per cent, were not attending school; that 24,173, or 21.69 per cent, were 5 and 6 years of age; 74,869, or 67.18 per cent, were from 7 to 13, and 12,408, or 11.13 per cent, were 14 years of age. From the registration summary for the years 1903-08, it appears that the number of pupils of all ages enrolled in the public schools during the school year ending June 30, 1908, was 108,531, and in the evening schools 23,317. Taking the school population by wards, the largest quota of pupils 5 to 15 years old in the public schools was in Ward 20, *i. e.*, 6,731; the largest in private schools was in Ward 19, *i. e.*, 2,627, and the largest number not attending school was in Ward 8, *i. e.*, 920, while the smallest number in public schools was in Ward 11, *i. e.*, 1,510.

The Bulletin for 1908 makes a quarto volume of 160 pages, in which is assembled in comparative form a large amount of current information about Boston nowhere else so accessible and comprehensive.

MUNICIPAL REGISTER AND MUNICIPAL CALENDAR.

This department, in accordance with a vote of the Joint Committee of the City Council on Rules and Orders, was intrusted with the work of compiling the copy for the Municipal Register of 1908, and seeing it through the press. At our suggestion, the Joint Committee on Rules and Orders again authorized the publication of a document edition of the Register in addition to the usual edition bound in cloth.

The Register for 1908, which conforms to the make-up adopted in 1899, contains 317 pages, including an index of nine pages.

At the opening of the year we issued the Municipal Calendar for the year 1908. The purpose of the calendar is to furnish authoritative information succinctly for the convenience

of those who have to do business for or with the City on dates established by ordinances, regulations or statutes. Accordingly, under the several months, the dates are given for the organization of the City Government, the holding of elections, the meetings of the City Council and the School Committee, for making application for licenses, abatement of taxes, etc., and for rendering reports and returns to the State and City governments. Generally, the ordinance or statute under which a date is fixed is cited.

Special reports in response to inquiries from the Mayor, members of the City Council, as well as for heads of departments and the public, have continued to increase within the year.

The distribution of the public documents of the City among individuals, libraries and the executive departments of other cities, and the securing of municipal and governmental reports and publications in return, continues to form a considerable and important part of our work.

During the year 663 persons or institutions have received regularly one or more of our publications (exclusive of their regular distribution among the departments of the city). Thanks to the facilities afforded us by the Smithsonian Institution in Washington, our exchange of documents and publications with foreign cities, etc., has been effected with a minimum of expense and trouble. We have forwarded to our correspondents, through the Smithsonian Institution, 442 packages, besides numerous documents and communications sent direct by mail or express.

Respectfully submitted,

B. RODMAN WELD, *Chairman.*

GORDON ABBOTT.

WILLIAM D. C. CURTIS.

WILLIAM JACKSON.

F. SPENCER BALDWIN.

APPENDIX.

STATEMENT OF EXPENSES.

STATISTICS DEPARTMENT.

General Classification of Expenditures, 1908-09.

Appropriation	\$12,000 00
Unexpended	846 01
	<u>\$11,153 99</u>

Expenditures.

1. Secretary	\$3,000 00
2. Clerk hire	2,940 22
3. Printing	4,753 32
4. Stationery and supplies	150 24
5. Postage	144 00
6. Telephone	78 58
7. Expressage	71 63
8. Books and periodicals	16 00
	<u>\$11,153 99</u>

STATISTICS DEPARTMENT.

Inventory of Books and Periodicals.

	Bound Volumes.	Unbound.	Total.
General library.....	83	660	743
Periodicals.....	2	242	244
City documents (Boston).....	610	1,220	1,830
State documents (Massachusetts).....	310	220	530
Other state documents.....	26	42	68
United States documents.....	182	347	529
Cities (United States).....	626	721	1,347
“ (Great Britain).....	148	203	351
“ (Germany).....	53	412	465
“ (France).....	18	255	273
“ (All other).....	48	341	389
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ANNUAL REPORT
OF THE
STREET DEPARTMENT
FOR THE YEAR 1908.

[DOCUMENT 38. — 1909.]

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ANNUAL REPORT
OF THE
STREET DEPARTMENT
FOR THE
YEAR ENDING JANUARY 31, 1909.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,—In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Street Department for the year ending January 31, 1909, is herewith respectfully submitted.

ORGANIZATION.

The work of the department has been carried on during the year according to the reorganization created by chapter 3 of the Ordinances of 1908. The present organization is similar to that established in 1891 and amended in 1895, except that the then existing Lamp Department is now a division of the Street Department. The several divisions of the department are as follows:

Central Office,
Bridge Division,
Ferry Division,
Lamp Division,
Paving Division,

Sanitary Division,
Sewer Division,
Street Cleaning and
Watering Division,
Boston and Cambridge
Bridges.

NOTE.—The Boston and Cambridge Bridges Division, so called, is not properly a division of the Street Department, as this work is in charge of a commission of two, one member appointed by the Mayor of Boston and the other by the Mayor of Cambridge, under the provisions of chapter 467 of the Acts of 1898 and chapter 412 of the Acts of 1904; but on account of the fact that the present Superintendent of Streets is the Boston member of this commission and also because one-half of the expenses of this commission is defrayed from the appropriation for the Bridge Division of this department, it is here treated as a division of this department.

APPROPRIATIONS.

The money assigned for the work of the Street Department during the year was made available from the following sources:

First.—Maintenance appropriation, derived from the income of the city raised by taxation. Before the commencement of each financial year, February 1, the department estimates of the amounts necessary for the proper maintenance of the various divisions are submitted to the Mayor, who makes such recommendation as he may deem proper to the City Council. The maintenance appropriations, as passed by the City Council and approved by the Mayor, were as follows:

Central Office	*
Bridge Division	\$200,000 00
Ferry Division	225,000 00
Lamp Division	800,000 00
Paving Division	850,000 00
Sanitary Division	750,000 00
Sewer Division	350,000 00
Street Cleaning and Watering Division	570,000 00
Boston and Cambridge Bridges	†

Second.—Appropriation from tax levy for permanent street improvements. (Paving Division.)

Balance February 1, 1908 (loan)	\$5,052 31
Appropriation (tax levy)	249,000 00
Revenue	615 00
Total	\$254,667 31
Amount expended during year	177,566 28
Balance February 1, 1909	<u>\$77,101 03</u>

* Paid from appropriations for Paving and Sewer Divisions.

† Paid from appropriation for Bridge Division.

Third.— Loan inside the debt limit for building new streets assessable on abutting property, authorized by chapters 214 and 393 of the Acts of 1906. (Paving Division.)

Amount expended during the year	.	.	.	<u>\$99,412 74</u>
---------------------------------	---	---	---	--------------------

Fourth.— Loans inside the debt limit under the provisions of chapter 426 of the Acts of 1897, as amended by chapter 204 of the Acts of 1908, from which all sewerage works are built, except those in the Charles River Basin watershed. (Sewer Division.)

Balance February 1, 1908	.	.	.	.	\$73,778 09
Loan	.	.	.	.	: 300,000 00

Total	.	.	.	.	\$373,778 09
Expended during the year	.	.	.	.	322,482 32

Balance February 1, 1909	.	.	.	.	<u>\$51,295 77</u>
--------------------------	---	---	---	---	--------------------

Fifth.— Loan under the the provisions of chapter 383 of the Acts of 1903, as amended by chapter 485 of the Acts of 1907 and by chapter 514 of the Acts of 1908, authorizing the expenditure in each of the years from 1908 to 1912, inclusive, of one-twentieth of one per cent of the city's taxable valuation on the separate system of drainage. (Sewer Division.)

Balance February 1, 1908	.	.	.	.	\$176,597 47
Loan (\$255,000 inside, \$400,000 outside, the debt limit)	.	.	.	.	655,000 00

Total	.	.	.	.	\$831,597 47
Expended during the year	.	.	.	.	599,973 76

Balance February 1, 1909	.	.	.	.	<u>\$231,623 71</u>
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GENERAL REMARKS.

The department has been conducted during the year along the lines established during previous years. The policy of doing the work of maintenance and repairs by the day labor force has been continued, and, in general, new construction has been done by contract. Efforts have been made to economize along certain lines, and some reduction has been made in the labor force. Analysis of the work done shows a greater amount of work performed by the smaller force, at a lower price per unit, than by the larger force during the

previous year. The result demonstrates conclusively that the employment of inefficient and incompetent men, with duties insufficient for regular employment, had resulted in a demoralization of the entire force and an expense beyond the actual compensation of the employees in question. It is probably a fact that the efficiency of the average city laborer is considerably less than that of the average laborer in private employ. In comparing the cost of day labor work with that of contract work, it should be taken into consideration that the city laborer is handicapped in the matter of efficiency by circumstances not altogether of his own making. Some of these are as follows:

The working of the Civil Service law, notwithstanding its merits, places the department at a disadvantage by furnishing, in certain lines, men who, on account of age or lack of previous experience, are incompetent and inefficient. Especially is this true of that part of the law known as the "Veterans' Preference Act"; and it is particularly unfortunate that men furnished under its provisions are usually of the grade of foremen, thereby lessening to a great degree the efficiency of the subordinates under them.

The various executive orders regarding payment to be allowed for holidays reduces the working time of the force by about $10\frac{1}{2}$ per cent, as compared with contract work, and entail upon the department a yearly expenditure of approximately \$170,000 for which no service is rendered. The wages of city laborers average about 25 per cent above those paid by contractors for similar work, and entail a further excess cost of about \$320,000 per year to the four divisions of this department employing a force of common laborers, viz., the Paving, Sanitary, Sewer and Street Cleaning Divisions.

Some extension of the contract system has been made during the year, as follows:

In the matter of hired teams, the petty patronage on this account had approached the condition of a nuisance. During the early part of the year, the department had upward of one thousand applications from persons wishing to furnish teams at the standard price of \$6 per day. This price was considerably greater than that paid by outside parties, and it was determined to secure teams by open competition, with the result that the bills for teaming for the year have been reduced \$144,035.98 from the amount paid during the preceding year, and this with a considerable increase in the amount of work done and without increase in the number of teams owned directly by the department. These contracts, which did not include watering carts, took effect between July 22 and

August 12, 1908, so that the saving given is only for the last six months of the year. It is intended to extend the contract system to the street watering service during the ensuing year.

The contract system has also been extended, with considerable success, to the matter of snow removal. It does not appear, however, that it is advisable to undertake the entire work of snow removal by contract. As an auxiliary to the force of city teams the contract system has seemed at present to be desirable.

In accordance with the recommendations of the Finance Commission, all the stone-crushers owned by the city have been sold or their services otherwise dispensed with, and crushed stone has been secured by advertisement in the open market, resulting in a very material saving.

The matter of cleaning catch-basins and sewers has been undertaken by contract after public competition, and this has resulted in a considerable reduction in the cost of doing the work.

In the Sanitary Division, the contract system has been extended to the collection of ashes in the East Boston and Brighton districts, with a saving of approximately 50 per cent of the cost of doing the work by day labor.

The Lamp Division in all its branches has reverted to the contract system.

An analysis of the figures given above indicates that the Street Department expends in certain ways a very large sum of money for a purpose that, for the need of a better word, may be designated as charity. It is worthy of serious consideration whether steps should not be taken to prevent the extension of the day labor system under present conditions and to allow the money expended under it to be economically used for the benefit of the general public according to contract methods. With this end in view few additions to the labor service have been made during the past year, except in so far as it has been necessary to appoint new men in the clerical and engineering force to perform duties in connection with the day labor force already employed and with the contract work.

The present report is made with the object of giving desirable information in greater detail and with a greater regard to unit costs than has been presented in reports of recent years. While the result has been accomplished to some extent, it has been found impossible to give such information as completely as desired, owing to the fact that the accounts for the early portion of the year were in the same form as in

previous years, and necessary data were therefore not available. It is intended that the report for the ensuing year shall be more satisfactory in this respect.

The following are some of the general details regarding the operation of the divisions constituting the Street Department. The appropriations, as given, include also revenues and, in the case of special appropriations, balances on hand February 1, 1908.

BRIDGE DIVISION.

Appropriation and revenue	\$200,595 00
Expenditures	198,797 30
Unexpended balance	\$1,797 70

The appropriation for the Bridge Division has been devoted entirely to the maintenance and necessary general repairs by day labor methods. Many of the bridges are in need of extensive minor repairs, cleaning, painting, etc., and an increase should be made in the appropriation for the ensuing year, to allow this work to be done, after which, the usual appropriation should be ample for their maintenance in satisfactory condition.

FERRY DIVISION.

Appropriation and revenue	\$225,044 85
Expenditures	249,068 39
Deficit	\$24,023 54

In the Ferry Division, the work has been continued along the lines of former years. Some slight reduction and rearrangement of the force has been made in the interests of economy and efficiency; but, in general, the organization remains the same. Increases of wages by executive order during 1907, coupled with the decreased appropriation for the past year, have rendered a curtailment of service necessary by dispensing with the service of one boat for a portion of the time.

The contract for delivering coal from the coal pockets to the boats was let by public competition, instead of by the former method of giving this contract to a favored contractor without competition. The result has been a saving of \$1,001.08 for the year.

Slight labor troubles developed early in the year on account of the demands of the engineer force for vacations or increases in salaries, resulting in an incipient strike on the part of the engineers and necessitating the discharge and replacement of the entire force. Since the discharge of this force, the conditions of service on the ferries have materially improved.

LAMP DIVISION.

Appropriation and revenue	\$800,023 75
Expenditures	809,510 06
Deficit	<u>\$9,486 31</u>

The appropriation for this division for the past year was materially reduced from that of the preceding year, and was somewhat exceeded, as shown above.

A new contract for the gas lighting of the city was entered into with the Rising Sun Street Lighting Company for a period of one year, beginning September 15, 1908. Previous to this time, the work of maintenance was done directly by city laborers, the lamps being leased from the Rising Sun Street Lighting Company. This contract has resulted in a considerable economy over the previous method and in much more satisfactory service.

PAVING DIVISION.

	Maintenance.	Street. Improvements.
Appropriations and revenue	\$863,565 09	\$254,667 31
Expenditures	833,981 43	177,566 28
Unexpended balances	<u>\$29,583 66</u>	<u>\$77,101 03</u>

The expenditures for this division, except the expenditures on account of streets laid out under chapter 323 of the Acts of 1891, and amendments thereof, and a balance of about \$5,000 remaining from the loan of 1907 for Street Improvements, have been entirely from appropriations from the tax levy. As has been the custom, the greater portion of this expenditure has been by day labor methods on account of maintenance and repairs. The remarks regarding the cause of the inefficiency of the city laborer probably apply more directly to this division than to any other division of the Street Department. The same is true of the remarks regard-

ing the excess paid for hired teams. Considerable increase of efficiency has been noted, and conditions are far more satisfactory at the present time.

The percentage of macadam streets in the city is excessive, and the requirements of automobile traffic have made the question of maintenance a serious one. It can be mathematically demonstrated that a great saving could be made by placing suitable permanent pavement upon the greater portion of residential streets; and in the interests of economy steps should be taken as rapidly as possible to reduce the area of macadam pavement.

During the year experiments have been made with various bituminous binders for macadam pavements, and it is anticipated that different forms of bituminous macadam will be extensively laid during the ensuing year, replacing the present macadam pavements.

A reduction has been made in the number of districts and district foremen by the combination of Districts 2 and 3 and of Districts 5 and 11, under one foreman in each case. Otherwise the organization remains the same as for previous years. Further combinations and reductions are anticipated during the ensuing year.

SANITARY DIVISION.

Appropriation and revenue	.	.	.	\$750,329 00
Expenditures	.	.	.	745,200 90
Unexpended balance	.	.	.	\$5,128 10

This division has shown the most gratifying increase in efficiency during the year of any division of the Street Department, although the appropriation was somewhat smaller than for the preceding year and the increase in the amount of work done was normal. The cost of doing the work has materially decreased, and the division finishes the year with a substantial surplus remaining from its appropriation. The division was perhaps more greatly overloaded with superfluous employees than any other, and dispensing with the services of such employees, coupled with the increase in the size of the loads hauled and the amount of work done, has been responsible for the decrease in cost. As in the other divisions, the entire economy has been effected during the last eight months of the fiscal year; and conditions are such that during the ensuing year much greater economies will be

accomplished. Additions have been made to the working plant, and improved apparatus and a considerable number of teams purchased during the year.

On account of the expiration of the contract with the City Refuse Utilization Company (which terminated on September 15, 1908) for the disposal of city waste, and also because of the growing scarcity of inland dumps for the disposal of refuse, extensive investigations have been made during the present year, with the idea of finding in the near future a more acceptable method for the disposal of the city waste. Bids for incinerators for the disposal of a large part of the city refuse were asked for, but the returns were unsatisfactory, indicating a cost beyond an amount that could be reasonably considered by the city at the present time. Investigations are still in progress, and it is hoped that some satisfactory general scheme may be outlined in the near future.

SEWER DIVISION.

	Maintenance.	Sewerage Works.	Separate System.
Appropriations and revenue . . .	\$352,142 14	\$373,778 09	\$831,597 47
Expenditures . . .	351,162 41	322,482 32	599,973 76
Unexpended bal- ances . . .	\$979 73	\$51,295 77	\$231,623 71

This division has been conducted along the same lines as for previous years. The amount of the force has been somewhat reduced, and the division finished the year within its appropriation and at a considerable reduction from the expenses of the previous year.

STREET CLEANING AND WATERING DIVISION.

Appropriation and revenue . . .	\$570,050 50
Expenditures	573,955 81
Deficit	\$3,905 31

The appropriation for this division was materially reduced from those of previous years, and the division somewhat exceeded it. As the work of this division is more closely under observation by the public than that of any other and most nearly affects the comfort and convenience of the

citizens, it is recommended that an increased appropriation be made for the ensuing year, in order that the work of the division may be extended.

During the year, extensive experiments have been made with various dust-laying compounds, and as a result the use of calcium chloride has been adopted to a considerable extent on suburban streets, and an emulsion of crude petroleum has been found most suitable upon streets where the traffic is considerable. These materials are greatly superior to water as dust preventatives, and although the oil emulsion has some disadvantages, they are more than compensated for by the advantages obtained. It is the intention to extend the use of these materials very greatly during the ensuing year.

Beginning early in December, 1908, the force of the division was placed in uniforms, the regulation government khaki being adopted for the purpose. This change has resulted in greater neatness in the appearance of the force, and seems also to have been productive of increased efficiency.

BOSTON AND CAMBRIDGE BRIDGES.

Appropriation	.	.	.	.	.	.	—
Expenditures	.	.	.	.	.	.	\$18,524 29

As has been the custom, the work of the Boston and Cambridge bridges has been directly under the charge of the Cambridge member of the commission, Mr. William H. Joyce, and to him belongs in a great measure the credit for the very excellent work accomplished.

No appropriation was made for this work during the year, and the expenditures given at the head of this paragraph were taken from the general appropriation for the Bridge Division, and are included under the expenditures given for that division.

Following are appendices containing detailed reports and information regarding the conduct of the various divisions.

The expenditures under the several appropriations for the year 1908 were as follows:

Maintenance	\$3,761,676 30
Street Improvements	177,566 28
Highways, Making of	99,412 74
Separate Systems of Drainage	599,973 76
Sewerage Works	322,482 32
Bridge, Specials	2,668 83
Paving, Specials	7,577 39
Total	<u>\$4,971,357 62</u>

**Recapitulation of Expenditures for the Twelve Months ending
January 31, 1909.**

OBJECT OF APPROPRIATION.	Current Expenses.	Special Appropriations.	Totals.
Street Department:			
Bridge Division	\$198,797 30	\$2,668 83	\$201,466 13
Ferry Division	249,068 39	.....	249,068 39
Lamp Division	809,510 06	.....	809,510 06
Paving Division	833,981 43	7,577 39	841,558 82
Sanitary Division	745,200 90	.....	745,200 90
Sewer Division	351,162 41	922,456 08	1,273,618 49
Street Cleaning and Watering Division	573,955 81	.....	573,955 81
Street Improvements . . . . .	.....	177,566 28	177,566 28
Highways, Making of . . . . .	.....	99,412 74	99,412 74
Totals	\$3,761,676 30	\$1,209,681 32	\$4,971,357 62

Financial Statement of the Street Department Appropriation.

February 1, 1908, to January 31, 1909.

Maintenance.

APPROPRIATION.	Appropriations and Transfers during 1908-09.	Revenue.	Total Credits.	Expenditures for the twelve months ending January 31, 1909.	Balances of Divisions Jan. 31, 1909.*
Street Department:					
Bridge Division.....	¹ \$198,202 30	\$595 00	\$198,797 30	\$198,797 30	\$1,797 70
Ferry Division.....	² 249,023 54	44 85	249,068 39	249,068 39	.....
Lamp Division.....	³ 809,500 00	23 75	809,523 75	809,510 06	13 69
Paving Division.....	⁴ 820,476 68	13,565 09	834,041 77	833,981 43	83 66
Sanitary Division....	⁵ 744,871 90	329 00	745,200 90	745,200 90	5,128 10
Sewer Division.....	⁶ 349,020 27	2,142 14	351,162 41	351,162 41	979 73
Street Cleaning and Watering Division..	⁷ 573,905 31	50 50	573,955 81	573,955 81	.....
Totals.....	\$3,745,000 00	\$16,750 33	\$3,761,750 33	\$3,761,676 30	\$8,002 88

¹ Appropriation	\$200,000 00	
Revenue	595 00	
Transferred to Ferry Division	1,797 70	\$198,797 30
² Appropriation	\$225,000 00	
Revenue	44 85	
Transferred from City Treasury	24,023 54	\$249,068 39
³ Appropriation	\$800,000 00	
Revenue	23 75	
Transferred from City Treasury	9,500 00	
Transferred to City Treasury	13 69	\$809,510 06
⁴ Appropriation	\$850,000 00	
Revenue	13,565 09	
Transferred to Ferry Division	20,023 32	
Transferred to Lamp Division	9,500 00	
Transferred to City Treasury	60 34	\$833,981 43
⁵ Appropriation	\$750,000 00	
Revenue	329 00	
Transferred to Street Cleaning and Watering Division	3,905 31	
Transferred to Ferry Division	1,222 79	\$745,200 90
⁶ Appropriation	\$350,000 00	
Revenue	2,142 14	
Transferred to Ferry Division	979 73	\$351,162 41
⁷ Appropriation	\$570,000 00	
Revenue	50 50	
Transferred from City Treasury	3,905 31	\$573,955 81

* For detail of distribution see foot of table.

Comparative Table Showing Cost of Maintenance of the Street Department since 1899.

DIVISION.	1899-1900.	1900-1901.	1901-1902.	1902-1903.	1903-1904.	1904-1905.	1905-1906.	1906-1907.	1907-1908.	1908-1909.
Central office.....	\$18,799 41	\$19,994 66	\$24,999 83	\$20,386 04	\$21,092 06	\$20,853 21	\$21,902 91	\$188,235 55	\$199,342 12	\$180,273 01
Bridge.....	120,408 72	138,580 56	170,866 18	164,082 13	171,789 52	185,269 84	184,564 54			
Boston and Cambridge Bridges..	15,998 18	17,353 27	18,394 97	16,400 04	16,715 12	16,263 90	20,878 84	11,609 64	11,230 57	18,524 29
Ferry.....	211,822 87	236,999 91	248,754 06	227,688 29	254,535 23	258,126 20	273,995 90	265,463 83	294,357 82	249,068 39
Lamp.....								826,804 01	840,016 93	809,510 06
Paving.....	705,432 68	753,562 34	837,831 07	780,236 39	785,946 38	808,604 99	874,636 88	860,246 89	831,113 67	775,838 06
Removal of snow..	154,625 18	29,138 38	93,518 45	121,899 66	114,395 94	264,840 43	137,115 89	77,023 96	144,117 96	58,143 37
Sanitary.....	567,107 81	609,664 67	623,000 50	675,319 64	654,975 87	706,529 89	703,382 08	767,859 76	790,243 78	745,200 90
Sewer.....	347,133 64	362,060 24	345,669 05	301,743 69	288,679 26	324,360 72	381,687 78	374,075 92	402,389 90	351,162 41
Street Cleaning....	322,951 15	339,747 23	356,445 72	392,802 09	403,626 11	434,172 62	448,837 79	465,005 94	501,688 67	419,275 91
Street Watering...	174,625 97	174,742 45	164,259 36	160,147 25	164,104 74	165,071 08	189,347 50	153,423 07	152,235 45	154,679 90
Totals.....	\$2,638,905 61	\$2,681,843 71	\$2,883,739 19	\$2,860,705 22	\$2,875,850 23	\$3,184,092 88	\$3,236,350 11	\$3,989,748 57	\$4,166,736 87	\$3,761,676 30

Hired Team Contracts.

DISTRICT.	Awarded to.	Dated.	Single, Per Day.	Double, Per Day.	Extra Men, Per Day.	From.	To.	Paving Division.	Sewer Division.	Street Cleaning Division.	Total.
No. 1. South Boston*	David D. McDermott...	July 28, 1908	\$3 20	\$5 35	\$2 15	Aug. 1, 1908	Feb. 1, 1909	\$936 48	\$1,064 66	\$4 80	\$2,005 94
No. 2. East Boston*	J. P. O'Riorden.....	July 28, 1908	3 25	5 50	2 25	Aug. 1, 1908	Feb. 1, 1909	1,320 62	340 50	nothing	1,661 12
No. 3. Charlestown*	J. P. O'Riorden.....	July 28, 1908	3 25	5 50	2 25	Aug. 1, 1908	Feb. 1, 1909	93 50	nothing	2,605 52	2,699 02
No. 4. Brighton*	Joseph McGreevey.....	Aug. 4, 1908	3 00	4 90	2 00	Aug. 10, 1908	Feb. 1, 1909	4,181 96	208 25	nothing	4,390 21
No. 5. West Roxbury*	James E. Noble.....	July 22, 1908	3 50	5 50	2 25	Aug. 1, 1908	Feb. 1, 1909	4,042 25	2,070 75	nothing	6,113 00
Nos. 6-12. Dorchester†	John T. Keogh & Bro..	July 30, 1908	3 25	5 00	2 00	Aug. 1, 1908	Feb. 1, 1909	3,515 88	1,435 00	1,542 13	6,493 01
No. 7. Roxbury†	Mrs. Mary Doyle.....	June 19, 1908	3 15	4 48	2 00	July 1, 1908	Feb. 1, 1909	1,988 62	336 84	1,975 58	4,301 04
No. 8. South End†	John W. Collins.....	Aug. 12, 1908	3 15	4 50	2 00	Aug. 12, 1908	Feb. 1, 1909	3,086 10	88 88	4,807 42	7,982 40
No. 9. Back Bay*	John A. Janse.....	July 22, 1908	3 00	4 90	2 00	Aug. 1, 1908	Feb. 1, 1909	3,732 50	644 90	792 95	5,170 35
No. 10. North and West Ends§	Bernard E. Grant.....	July 22, 1908	3 00	4 85	2 00	Aug. 1, 1908	Feb. 1, 1909	1,522 63	445 76	1,094 95	3,063 34

* Advertised and awarded to lowest bidder.

† Advertised and awarded to second lowest bidder on doubles and third lowest bidder on singles.

‡ Advertised and awarded to lowest bidder on doubles and fifth lowest bidder on singles.

§ Advertised and awarded to lowest bidder on singles and second lowest bidder on doubles. Previous to award of above, teaming contract prices were: Singles, \$3.50 per day; doubles, \$6 per day; extra men, \$2.25 per day.

The following tables show the snowfall and rainfall since 1903:

Snowfall (inches).

MONTH.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
November.....	2.2	.....	.....	1.1		
December.....	10.6	12.0	3.5	15.5	7.0	3.5
January.....	35.7	21.3	6.1	16.1	4.3	11.2
February.....	16.5	8.0	6.1	25.5	9.3	2.3
March.....	8.9	3.6	21.9	6.6	4.8	3.1
April.....	1.4	.....	.....	.....	0.8	
Totals.....	75.3	44.9	37.6	64.8	26.2	20.1

Rainfall (inches).

	1903.	1904.	1905.	1906.	1907.	1908.
January.....	3.43	4.80	4.09	2.96	2.54	2.47
February.....	3.90	2.49	1.59	2.66	1.88	2.96
March.....	5.95	2.43	2.25	5.45	1.66	2.97
April.....	4.43	9.14	2.14	2.15	3.31	1.70
May.....	0.32	3.38	1.47	4.91	3.12	3.78
June.....	7.19	2.06	5.23	2.57	2.56	1.08
July.....	2.99	1.23	1.00	5.38	1.09	3.17
August.....	3.33	2.19	3.39	1.58	1.10	4.35
September.....	2.43	5.57	5.10	2.64	7.43	0.68
October.....	3.95	2.13	0.82	3.88	2.54	3.70
November.....	1.48	1.70	1.77	2.55	6.02	0.74
December.....	2.57	2.52	3.23	3.96	4.31	2.47
Totals.....	41.97	39.64	32.08	40.60	37.56	30.07

In this rainfall is included the precipitation during the winter months, which equals one-tenth of an inch to one inch of snowfall.

Nova Scotia Coal.

Importations of Coal from Nova Scotia at the Port During the Year Ending January 31, 1909.

MONTHS.	Tons.	Value.
February, 1908.....	57,300	\$111,735
March.....	44,600	86,972
April.....	33,000	64,350
May.....	15,100	29,543
June.....	33,300	64,935
July.....	23,600	46,020
August.....	26,750	52,162
September.....	21,550	42,023
October.....	22,500	43,877
November.....	31,950	62,304
December.....	26,200	54,091
January, 1909.....	26,200	51,092
Total.....	362,050	\$709,104

The Following Table Shows the Area of Pavement in Square Yards by Districts.

DISTRICTS.	Asphalt.	Granite Block.	Wooden Block.	Plank on Bridges.	Brick.	Cobble.	Bitulithic.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1907, report.....	332,024	2,158,673	44,073	43,887	4,070	2,212	115,075	6,348,389	480,917	186,031	9,715,351
February 1, 1909.											
City Proper.....	246,434	950,082	44,805	15,943	3,863	1,315	71,336	609,551	1,449	.....	1,944,778
Charlestown.....	5,284	260,040	.....	5,473	.....	.....	.....	171,313	275	.....	442,385
East Boston.....	1,925	135,534	.....	2,763	251	897	620	450,881	16,357	503	609,731
South Boston.....	25,021	396,561	.....	8,579	.....	.....	17,784	365,184	18,672	106,082	937,883
Roxbury.....	52,988	281,876	4,140	1,417	.....	.....	25,374	1,137,238	43,325	16,616	1,562,974
West Roxbury.....	.....	14,186	.....	2,061	.....	.....	.....	1,304,683	71,951	23,828	1,416,709
Dorchester.....	.....	129,664	850	4,659	493	.....	.....	1,632,537	187,554	20,360	1,976,117
Brighton.....	130	.....	.....	4,094	.....	.....	.....	734,859	140,586	4,815	884,484
Totals.....	¹ 331,782	² 2,167,943	49,795	44,989	4,607	2,212	115,114	³ 6,406,246	480,169	172,204	9,775,061

Total area of pavements on public streets, 9,775,061 square yards.
NOTE.— In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston.
Territory annexed from Brookline is included in city proper.
1. Of this amount 715 square yards equal asphalt blocks.
2. Of this amount 471,716 square yards equal granite block paving on concrete base.
3. Of this amount 1,801 square yards equal Hassam pavement, and 946 square yards equal Blome granitoid concrete blocked pavement.
24,341 square yards public alleys laid out under chapter 298 of the Acts of 1898 included in this table.
286,743 square yards public streets in charge of Park Department included in this table.
In addition to this table there are 4,395 square yards accepted foot passageways.

The following changes in pavements were made during the year:

0.01 mile or 41 square yards asphalt changed to wood block.
0.01 mile or 187 square yards granite block changed to asphalt.
0.31 mile or 5,181 square yards granite block changed to wood block.
0.00 mile or 40 square yards granite block changed to brick.
0.02 mile or 174 square yards granite block changed to macadam.
0.01 mile or 500 square yards plank on bridge changed to wood block.
0.01 mile or 216 square yards plank on bridge changed to brick.
0.02 mile or 298 square yards plank on bridge changed to macadam.
0.42 mile or 7,076 square yards macadam changed to granite block.
0.03 mile or 448 square yards macadam changed to not graded.
2.89 miles or 46,724 square yards gravel changed to macadam.
0.10 mile or 4,562 square yards not graded changed to granite block.
0.05 mile or 1,766 square yards not graded changed to plank on bridge.
0.04 mile or 2,308 square yards not graded changed to macadam.

Streets laid out or discontinued by the Street Commissioners during the year show:

Plank on bridges increased 0.01 mile or 99 square yards.
Macadam increased 0.17 mile or 2,435 square yards.
Gravel increased 2.58 miles or 41,961 square yards.
Not graded increased 0.05 miles or 1,687 square yards.

Streets laid out and constructed by Massachusetts Highway Commission during the year show:

Washington street, Lagrange street to Dedham line:
Macadam increased 16,194 square yards.
Not graded decreased 8,306 square yards.

Corrections on account of revision and other causes show:

Asphalt decreased 0.01 mile or 388 square yards.
Granite block decreased 0.05 mile and increased 3,214 square yards.
Plank on bridges increased 0.01 mile or 251 square yards.
Brick increased 0.00 mile or 281 square yards.
Bitulithic increased 0.00 mile or 39 square yards.
Macadam decreased 0.09 mile or 2,752 square yards.
Gravel increased 0.01 mile or 4,015 square yards.
Not graded increased 0.00 mile or 980 square yards.

Length of Pavements.

The Following Table Shows Length in Miles and Character of Pavement on Accepted Streets February 1, 1909.

DISTRICTS.	Asphalt.	Granite Block.	Wooden Block.	Plank on Bridges.	Brick.	Cobble.	Bitulithic.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1907, report.....	21.69	96.50	1.77	2.07	0.38	0.29	6.18	346.02	31.30	5.40	511.60
February 1, 1909.											
City Proper.....	16.47	42.39	1.88	0.67	0.35	0.15	3.59	28.12	0.11	.....	93.73
Charlestown.....	0.33	11.32	.....	0.23	.....	.....	.....	11.61	0.02	.....	23.51
East Boston.....	0.11	6.29	.....	0.19	.....	0.14	0.03	21.23	0.79	0.03	28.81
South Boston.....	1.99	17.73	.....	0.38	.....	.....	1.04	19.87	0.90	3.11	45.02
Roxbury.....	2.78	12.16	0.19	0.05	.....	.....	1.52	65.50	3.08	0.52	85.80
West Roxbury.....	.....	0.64	.....	0.10	.....	.....	.....	77.38	4.78	0.84	83.74
Dorchester.....	.....	6.10	0.03	0.22	0.04	.....	.....	93.10	11.66	0.64	111.79
Brighton.....	.....	.....	.....	0.26	.....	.....	.....	31.81	9.66	0.15	41.88
Total.....	*21.68	†96.63	2.10	2.10	0.39	0.29	6.18	‡348.62	31.00	5.29	514.28

TOTAL LENGTH OF PAVEMENTS ON PUBLIC STREETS, 514.28 MILES.

NOTE.— In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline is included in city proper.
* Of this amount 0.06 mile equals asphalt blocks.
† Of this amount 17.07 miles equals granite block paving on concrete base.
‡ Of this amount 0.12 mile equals Hassam pavement, and 0.06 mile equals Blome granitoid concrete blocked pavement.
4.71 miles public alleys, laid out under chapter 298 of the Acts of 1898, included in this table.
6.80 miles public streets in charge of Park Department included in this table.
In addition to this table there are 0.85 mile accepted foot passageways.

Public streets laid out by the Street Commissioners during the year show pavements increased 2.84 miles or 46,568 square yards; public streets discontinued show pavements decreased 0.03 mile or 386 square yards.

Corrections to previous measurements on account of revision and other causes show pavements decreased 0.13 mile or increased 5,640 square yards.

Total net increase — 2.68 miles or 59,710 square yards pavements on public streets.

The rate of increase, from year to year, is shown in the following table:

Miles.	Miles.	Miles.
1859.....111.50	1884.....374.10	1897.....459.12
1871.....201.32	1885.....379.60	1898.....471.19
1872.....207.40	1886.....383.55	1899.....479.47
1873.....209.24	1887.....390.30	1900.....489.55
1874.....313.90	1888.....392.72	1901.....491.85
1875.....318.58	1889.....397.84	1902.....496.90
1876.....327.50	1890.....404.60	1903.....499.85
1877.....333.20	1891.....409.60	1904.....500.39
1878.....340.39	1892.....434.59	1905.....502.20
1879.....345.19	1893.....443.34	1906.....502.80
1880.....350.54	1894.....447.65	1907.....510.04
1881.....355.50	1895.....452.12	1908.....511.60
1882.....359.85	1896.....456.11	1909..... 514.28
1883.....367.99		

Respectfully submitted,

GUY C. EMERSON,

Superintendent of Streets.

PART II.

APPENDICES.

APPENDIX A.

REPORT OF THE DEPUTY SUPERINTENDENT OF BRIDGE DIVISION.

BOSTON, MASS., February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

DEAR SIR, — I respectfully submit herewith the annual report of the Bridge Division for the fiscal year ending January 31, 1909.

There are in the City of Boston 163 bridges, not including culverts. Seven of these, namely, Brookline street, Cambridge, Cambridge street, Harvard, North Harvard street, Prison Point, and Western avenue to Cambridge, all connecting Boston and Cambridge, are in charge of two commissioners, one of whom is appointed by the Mayor of the City of Boston and the other by the Mayor of the City of Cambridge. The Charles River dam, on the site of the old Craigie Bridge, is in charge of the Charles River Basin Commission. One hundred and twenty-three bridges are supported wholly or in part by the City of Boston, twenty-seven of these being tide water bridges provided with a draw. Forty bridges are supported wholly by railroad corporations.

There are fourteen important drawbridges maintained by the City of Boston, namely, Broadway, Chelsea (south), Congress street, L street, and Warren, operated by steam, Atlantic avenue, Charlestown, Chelsea (north), Dorchester avenue, Dover street, Malden, Meridian street, and Summer street, operated by electricity; and Northern avenue, operated by compressed air, the compressors run by electricity.

Hearings have been held by the United States engineers regarding the removal of Mt. Washington Avenue Bridge, and it is anticipated that the United States authorities will require the removal of the structure of the old bridge in the near future.

The Chelsea Street Bridge was destroyed in the Chelsea fire of April 12, 1908. A special appropriation has been provided, and a new bridge is now being built, under the supervision of the Engineering Department.

The Northern Avenue Bridge was opened to travel October 26, 1908, and the maintenance of this bridge will entail an expense of about \$15,000 during the coming year.

The Congress Street Bridge has had extensive repairs both to the approaches and to the draw; and the machinery operating the draw has been overhauled and put in good order. The bridge is now in good condition, with the exception of the draw pier and fender guard.

The Massachusetts Avenue Bridge over the Boston & Albany Railroad has been rebuilt during the past year, and the surface of the Everett Street Bridge, Brighton, has been renewed.

Four hundred feet of the southerly end of the Cottage Street Footbridge, East Boston, has been removed, on account of the progress of the filling in of the flats on that end of the bridge.

The sluiceway on the westerly side of the railroad bridge on Southampton street has been filled in solid. The easterly sluiceway is in very bad condition, and the bridge and bulkheads should be rebuilt.

The elimination of grade crossings in East Boston has added the Sumner Street Bridge and the Webster Street Footbridge (both over the Boston & Albany) to the bridges in charge of this division of which Boston maintains the wearing surface.

The progress of the work on the Stony brook improvement has done away with the Linden Park street, Williams street, Keyes street, and Elmwood street bridges, which have been arched over, and the street built over them.

Many of the bridges are in very bad condition, and must have considerable attention during the coming year in order that they may be kept passable. On the Meridian Street Bridge, the roadway planking, water ways and pier are all in a very bad condition, and should be renewed. A new draw pier and draw landings should be built. As the repairs needed on this bridge are very extensive, a special appropriation should be provided for the purpose.

The Chelsea North Bridge will have to have special attention during the coming year; the sidewalk on the main bridge should be renewed, and also the sidewalk and roadway planking on the draw. The draw should have new machinery; the sides of the water ways and the fender guards should be removed; and the entire bridge should be painted. At least \$5,000 will be required to put this bridge in any fair kind of condition.

The entire Charlestown Bridge, together with the draw-tender's house, should be painted, which will mean an expenditure of about \$8,500.

The Huntington Avenue Bridge has been considered unsafe for heavy traffic for some time past. A special appropriation has been provided for this work, and the bridge will probably be rebuilt during the coming year.

There is a bill in the Legislature providing for the construction of a new bridge at Neponset. The draw now in use is too heavy to operate by hand, and the bridge is so old that it would not be economy to install operating machinery.

The North Beacon Street Bridge is in bad condition, and should be replaced by a drawless bridge.

Respectfully submitted,

THOMAS H. SEXTON,

Deputy Superintendent.

STATEMENT OF EXPENDITURES.

ADMINISTRATION.

Office expenses:

Salaries, superintendent and office force	\$5,504 72
Salaries, supervisors	2,307 79
Telephones	336 04
Printing, stationery and postage	908 70
Furniture and furnishings	45 74
Advertising	25 80
Traveling expenses	53 10
Medical inspector	9 00
Total, administration	<u>\$9,190 89</u>

MAINTENANCE EXPENSES.

Administration	\$9,190 89
On tide-water bridges	141,698 56
On inland bridges	14,999 77
* North Yard and stable	1,686 18
South Yard and stable	12,697 61

Total, Boston yards and bridges,	\$180,273 01
Boston and Cambridge bridges	18,524 29

Total, maintenance	<u>\$198,797 30</u>
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FINANCIAL STATEMENT.

Appropriation, 1908-09	\$200,000 00
Received from sale of old material	595 00
Total, appropriation and revenue	\$200,595 00
Expended February 1, 1908, to January 31, 1909,	\$198,797 30
Balance	1,797 70
	<u>\$200,595 00</u>

* Combined with South Yard April 25, 1909.

Special Appropriations in Charge of the Bridge Division.

NAME OF APPROPRIATION.	Appropriation and Balance.	Expended February 1, 1908, to January 31, 1909.
Chelsea Bridge, South Draw, Reconstruction of..	\$656 75	\$656 75
Meridian Street Bridge, Improvement of.....	2,012 08	2,012 08
	\$2,668 83	\$2,668 83

Amount expended and charged to maintenance
appropriation \$198,797 30
Amount expended and charged to specials 2,668 83

Grand total of expenditures from Febru-
ary 1, 1908, to January 31, 1909 \$201,466 13

INCOME.

The total amount received by the City Collector on account of the Bridge Division during the fiscal year was \$632.95, which includes an item of \$1.50 on account of the Boston and Cambridge bridges. The items are as follows:

For sale of old material \$597 95*
Rent 35 00

\$632 95

* Includes \$1.50 on account of Boston and Cambridge bridges.

CONTRACTS.

The following contracts were made by this division during the year:

DATE.	Contract.	Awarded to.	Progress.	Estimate.	Extras.	Total Paid.
*June 24..	Driving piles North Beacon Street Bridge.	W. H. Ellis..	Finished in 1908.	\$262 23	\$24 43	\$287 23
†July 2..	Planking Everett Street Bridge, Brighton.	Lawler Bros..	Finished, July 25, '08	\$432 00	24 28	474 66
‡Aug. 26..	Rewiring power room, Charlestown Bridge.	Lord Electric Company.	Finished in 1908.	40 00	.....	40 00

* Not advertised, bids invited; awarded to lower of two bidders furnishing new piles.

† Not advertised, bids invited; awarded to lowest of six bidders.

‡ Not advertised, bids invited; three bidders; awarded to one of two lowest who bid the same.

§ Approximate; paid \$450.28.

The following is a summary of the principal repairs made during the year:

TIDE-WATER BRIDGES.

- Broadway*.— Patched sheathing three times; sheathed once and put in new headers; repaired latch and center and put in new screw and oak headers; painted gates.
- Charlestown*.— Repaired waterways; repaired bulkhead four times; built locker; repaired headers twice; patched sheathing; sheathed once.
- Chelsea North*.— Patched sheathing seven times; repaired gate; repaired deck and motor; repaired float stage; patched sidewalk twice; put in new headers; patched deck twice; repaired latch; repaired draw and rests; put in new truck.
- Chelsea South*.— Patched sheathing 3 times; patched headers; sheathed downstream side; rebuilt sidewalk; sheathed entire once.
- Commercial Point*.— Sheathed both roadways.
- Congress Street*.— Sheathed twice; put in oak headers; patched sheathing twice; patched deck and paving; built fence; repaired headers once.
- Chelsea Street*.— Patched sheathing once.
- Dorchester Avenue*.— Repaired headers; patched sheathing three times; sheathed entire once; patched downstream side; repaired pier and house; bolts in gearing.
- Dover Street*.— Repaired sidewalk twice; repaired boat; painted gates; patched sheathing; sheathed downstream side.
- Granite*.— Patched sheathing.
- L Street*.— Patched sheathing twice; repaired and painted boat; repaired gate and rails; repaired sidewalk; sheathed upstream side.
- Malden*.— Repaired headers twice; patched deck twice; patched sheathing twice; sheathed once.
- Meridian Street*.— Repaired sidewalk; sheathed draw; repaired latches; put in new gate, fence and oak headers; put in two gate posts.
- Mt. Washington Avenue*.— Built fence; stripped draw.
- Neponset*.— Sheathed draw; repaired gate; painted boat; patched sheathing three times; repaired waterway; patched deck; rebuilt flaps; repaired iron strap.
- North Beacon Street*.— Repaired flap twice; repaired gear; patched sheathing three times; patched deck four times; sheathed twice.
- Northern Avenue*.— Built sand box.
- Summer Street*.— Sheathed both sides twice; patched deck twice; patched sheathing three times; patched oak headers.
- Warren*.— Patched deck three times; patched sheathing four times; repaired headers four times; repaired latch-block; sheathed upstream side; patched downstream side; sheathed downstream side twice; renewed deck once; fastened tracks

of draw; put in new gate post; sheathed entire once; repaired gate; put in new latches; planked pier.

Western Avenue (to Watertown).— Patched sidewalk; patched deck twice; patched sheathing twice.

Winthrop.— Patched deck four times; patched sheathing four times.

INLAND BRIDGES.

Albany Street (B. & A.).— Patched sheathing; sheathed; painted iron fence.

Allston (B. & A.).— Patched sheathing twice.

Ashland Street Railroad.— Sheathed.

Ashland Street (*Stony Brook*).— Decked and sheathed.

Athens Street (*Plymouth Division*).— Repaired fence.

Beacon Street (B. & A.).— Painted iron beams; rebuilt sidewalk; sheathed uptown side; repaired wheel guard; repaired sidewalk.

Bennington Street (B., R. B. & L.).— Sheathed downtown side.

Berkeley Street (B. & A.).— Patched deck twice; patched sheathing twice; sheathed.

Berwick Park (*Footbridge*).— Cleaned; painted twice; repaired steps; new top walk.

Boston Street (*Plymouth Division*).— Patched sheathing; repaired sidewalk.

Broadway (B. & A.).— Sheathed downtown side twice; painted ironwork; painted fence; patched sheathing five times.

Brookline Avenue (B. & A.).— Sheathed.

Brooks Street.— Painted steps.

Byron Street (B., R. B. & L.).— Built sidewalk.

Canterbury Street (*Stony Brook*).— Decked and sheathed.

Central Avenue.— Patched sheathing three times; patched deck twice.

Columbus Avenue.— Patched sheathing once; sheathed once; painted ironwork.

Cottage Street (*Footbridge*).— Moved house.

Dartmouth Street (B. & A.).— Patched sheathing.

Dorchester Avenue (*Railroad*).— Repaired sidewalk.

Everett Street (B. & A.).— Patched sheathing; repaired fence.

Ferdinand Street.— Patched sheathing; repaired fence; sheathed; rebuilt sidewalk; cleaned and painted iron girders.

Florence Street (*Stony Brook*).— Patched deck twice; patched sheathing twice; rebuilt.

Gainsboro Street (*Footbridge*).— Painted ironwork.

Harvard Street (*Midland Division*).— Sheathed north roadway.

Irvington Street (*Footbridge*).— Built fences; painted.

Linden Park Street (*Stony Brook*).— Patched deck; patched sheathing.

Massachusetts Avenue (B. & A.) — Patched deck three times; patched sheathing four times; rebuilt.

Massachusetts Avenue (B. & P.).— Sheathed; painted ironwork; repaired sidewalk.

Milton.— Repaired sidewalk.

Norfolk Street (North).— Sheathed.

Norfolk Street (South).— Repaired sidewalk.

Perkins Street (Footbridge).— Painted fence; painted stairs; built new steps.

Rutland Square (Footbridge).— Cleaned and painted.

Southampton Street (E.).— Patched deck twice; patched sheathing twice; braced bulkhead.

Southampton Street (Railroad).— Patched sheathing three times; patched deck twice; sheathed.

Summer Street (over A Street).— Painted.

Summer Street (over B Street).— Painted.

Summer Street (over C Street).— Painted.

West Fourth Street.— Patched sheathing five times; sheathed downtown side; repaired bulkhead.

West Newton Street.— Sheathed.

South Stable.— Built lockers.

Expenditures on Tide-water Bridges from February 1, 1908, to January 31, 1909.

BRIDGE	MAINTENANCE.		REPAIRS.			Totals.
	Salaries of Drawtenders.	Miscellaneous: Light and Power, Fuel, Sup- plies, etc.	Labor.	Lumber.	Ironwork and General Repairing.	
Atlantic avenue.....	\$8,532 08	\$172 13	\$9 25	.....	\$380 67	\$9,094 13
roadway.....	8,571 32	338 54	269 71	\$366 21	691 15	10,236 93
Charlestown.....	11,094 06	867 48	1,489 26	722 43	298 19	14,471 42
Chelsea North.....	8,322 79	209 19	548 14	203 37	820 37	10,103 86
Chelsea South.....	8,189 34	485 77	172 51	183 95	484 98	9,516 55
Chelsea street.....	189 75	.....	682 78	.....	.....	872 53
Commercial Point.....	50 00	.....	22 75	78 90	64	152 29
Congress street.....	7,136 15	543 80	744 47	970 63	434 19	9,829 24
Dorchester avenue.....	8,101 44	155 45	404 26	238 70	100 65	9,000 50
Dover street.....	8,169 39	129 56	179 36	418 07	207 34	9,103 72
Granite.....	243 80	3 85	37 75	27 69	36 12	349 21
street.....	7,768 68	459 38	304 38	244 78	909 08	9,686 30
Halden.....	7,976 68	154 21	105 13	171 19	140 45	8,547 66
Meridian street.....	8,033 64	189 46	294 01	138 36	947 87	9,603 34
St. Washington avenue.....	.....	120 00	251 76	.....	6 00	377 76
Leoponset.....	406 51	50	245 12	107 83	216 47	976 43
North Beacon street.....	203 25	.....	139 00	153 89	328 03	824 17
Northern avenue.....	2,345 62	394 28	3 00	.....	.....	2,742 90
Summer street.....	8,655 04	170 11	484 15	756 65	529 25	10,595 20
Warren.....	8,079 52	1,094 29	738 79	1,036 18	430 27	11,379 05
Western avenue to Water- town.....	203 26	2 75	196 90	68 80	21 93	493 64
Vinthrop (care taker).....	100 00	.....	177 23	418 73	.....	695 96
Public landings.....	.....	.....	125 00	14 75	12 00	151 75
Dundry bridges.....	.....	1,883 96	.....	1,010 06	.....	2,894 02
Totals.....	\$112,372 32	\$7,374 71	\$7,624 71	\$7,331 17	\$6,995 65	\$141,698 56

EXPENDITURES ON INLAND BRIDGES, FROM FEBRUARY 1, 1908,
TO JANUARY 31, 1909.

Albany street	\$324 34
Allston	138 69
Ashland street (over Providence Division)	115 84
Athens street	9 75
Beacon street (over Boston & Albany Railroad)	829 41
Beacon street (water way)	3 72
Bennington street	101 45
Berkeley street (over Boston & Albany Railroad)	152 38
Berwick park (footbridge)	295 82
Blue Hill avenue	4 50
Bolton street	47 07
Boston street	17 38
Boylston street (over Boston & Albany Railroad)	535 49
Broadway (over Boston & Albany Railroad)	914 47
Brookline avenue	322 90
Brooks street	61 20
Byron street	111 38
Cambridge street (over Boston & Maine Railroad)	14 99
Central avenue	294 19
Canterbury street	248 71
Columbus avenue (over Boston & Albany Railroad), ...	202 48
Cottage Farm	3 00
Cottage street (footbridge)	1,043 35
Dartmouth street (over Boston & Albany Railroad), ...	41 78
Dorchester avenue (over Plymouth Division)	134 42
Everett street (over Boston & Albany Railroad, Brighton)	3,011 74
Ferdinand street	546 50
Florence street	207 67
Gainsborough street	63 50
Gold street	3 25
Harvard street (over Midland Division)	68 54
Huntington avenue	2 87
Hyde Park avenue	12 85
Irvington street (footbridge)	640 64
Leyden street	34 50
Linden Park street	146 50
Massachusetts avenue (over Boston & Albany Railroad)	1,140 59
Massachusetts avenue (over Providence Division)	32 63
Milton	11 87
Norfolk street (north)	221 38
Norfolk street (south)	9 70
Perkins street (footbridge)	103 54
Southampton street (east)	568 43
<i>Carried forward</i>	\$12,795 41

<i>Brought forward</i>	\$12,795 41
Southampton street (over railroad)	211 81
Summer street (over B street)	34 50
West Fourth street (over N. Y., N. H. & H. R.R., Plymouth Division)	958 60
West Newton street	147 59
Removing snow and dirt, various inland bridges	851 86
Total expenditures on inland bridges.	<u>\$14,999 77</u>

NORTH AND SOUTH YARDS, MAINTENANCE.

*North Yard and stable	
Employees	\$1,191 48
Repairs	40 60
Gas	24 39
Stable expenses	429 71
Total, North Yard	<u>\$1,686 18</u>
South Yard and stable:	
Employees	\$9,637 67
Repairs	449 25
Fuel	137 58
Electric light	74 47
Stable expenses	2,398 64
Total, South Yard	<u>12,697 61</u>
Total, North and South Yards and stables	<u>\$14,383 79</u>

* Combined with the South Yard April 25, 1909.

Street Department, Bridge Division.

Traffic Account, September 11, 1908.

	CARS.			TEAMS.			FOOT PASSENGERS.		
	To Boston.	From Boston.	Total.	To Boston.	From Boston.	Total.	To Boston.	From Boston.	Total.
Atlantic avenue.....				814	744	1,558	3,724	4,457	8,181
Broadway.....	152	152	304	548	629	1,177	2,490	3,746	6,236
Charlestown.....	752	747	1,499	2,019	2,588	4,607	4,458	4,914	9,372
Chelsea North.....	525	498	1,023	842	888	1,730	1,102	1,138	2,240
Congress street.....				3,952	3,410	7,362	3,086	2,426	5,512
Dorchester avenue...	742	744	1,486	1,216	1,462	2,672	1,564	1,480	3,044
Dover street.....	316	321	637	591	605	1,196	2,663	3,310	5,973
L street.....				600	598	1,198	1,316	1,421	2,737
Malden.....	742	718	1,460	788	780	1,568	743	630	1,373
Meridian street.....	150	144	294	634	623	1,257	1,229	1,244	2,473
Summer street.....	78	78	156	1,225	1,187	2,412	8,751	7,115	15,866
Warren.....	164	161	325	3,684	2,888	6,572	3,237	2,518	5,755

LIST OF BOSTON BRIDGES.

I.—BRIDGES WHOLLY MAINTAINED BY BOSTON.

[In the list those marked with an asterisk (*) are over navigable waters, and are each provided with a draw.]

In Charge of Bridge Division.

- Allston, over Boston & Albany Railroad at Cambridge street, Brighton.
- Ashland street, over N. Y., N. H. & H. Railroad, Providence Division, West Roxbury.
- Athens street, over N. Y., N. H. & H. Railroad, Midland Division.
- * Atlantic avenue, over Fort Point channel.
- Baker street, at Brook Farm, West Roxbury.
- Beacon street, over outlet to Back Bay Fens.
- Beacon street, over Boston & Albany Railroad.
- Bennington street, over Boston, Revere Beach & Lynn Railroad.
- Berkeley street, over Boston & Albany Railroad.
- Berwick park (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.
- Blakemore street, over N. Y., N. H. & H. Railroad, Providence Division.
- Bolton street, over N. Y., N. H. & H. Railroad, Midland Division.
- Boylston street, over Boston & Albany Railroad.
- * Broadway, over Fort Point channel.
- Broadway, over Boston & Albany Railroad.
- Brookline avenue, over Boston & Albany Railroad.
- Brooks Street Bridge, Brighton.
- Byron street, over Boston, Revere Beach & Lynn Railroad.
- Charlesgate, over Ipswich street.
- * Charlestown, from Boston to Charlestown.
- * Chelsea [South], over south channel, Mystic river.
- * Chelsea street, from East Boston to Chelsea.
- Columbus avenue, over Boston & Albany Railroad.
- * Commercial Point, or Tenean, Dorchester.
- * Congress street, over Fort Point channel.
- Cottage Farm, over Boston & Albany Railroad, at Commonwealth avenue.
- Cottage street (footbridge), over flats, East Boston.
- Dartmouth street, over Boston & Albany Railroad.
- * Dorchester avenue (formerly Federal street), over Fort Point channel.
- * Dover street, over Fort Point channel.
- Ferdinand street, over Boston & Albany Railroad.
- Florence street, over Stony brook, West Roxbury.
- Gainsborough street (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.

- Gold street (footbridge), over N. Y., N. H. & H. Railroad, Midland Division.
- Huntington avenue, over Boston & Albany Railroad.
- Hyde Park avenue, over Stony brook, West Roxbury.
- Ipswich street, over waterway.
- Irvington street (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.
- * L street, over reserved channel at junction of Summer and L streets.
- * Malden, from Charlestown to Everett.
- Massachusetts avenue, over Boston & Albany Railroad.
- Massachusetts avenue, over N. Y., N. H. & H. Railroad, Providence Division.
- * Meridian street, from East Boston to Chelsea.
- * Northern avenue, over Fort Point channel.
- Shawmut avenue, over Boston & Albany and N. Y., N. H. & H. Railroad, Providence Division.
- Southampton street, east of N. Y., N. H. & H. Railroad, Midland Division.
- Summer street, over A street.
- Summer street, over B street.
- Summer street, over C street.
- * Summer street, over Fort Point channel.
- * Warren, from Boston to Charlestown.
- West Newton street, over N. Y., N. H. & H. Railroad, Providence Division.
- West Rutland square (footbridge), over N. Y., N. H. & H. Railroad, Providence Division.
- Winthrop, from Breed's Island to Winthrop.

In Charge of Bridge Division and Park Department.

- Columbia road, over N. Y., N. H. & H. Railroad, Plymouth Division.
- Columbia road, over Shoreham street.

In Charge of Park Department.

- Agassiz, in Fens.
- Arborway, in Arborway, over Stony brook.
- Audubon, in Riverway, over Boston & Albany Railroad.
- Bernier Street Footbridge, over Muddy river.
- Boylston, in Fens, over water way.
- Bridle path, in Riverway, over Muddy river.
- * Castle Island, in Marine Park, South Boston to Castle Island.
- Charlesgate, in Fens, over Boston & Albany Railroad.
- Circuit drive, over Scarboro pond, in Franklin Park.
- Commonwealth avenue, in Fens, over water way.
- Ellicott Arch, in Franklin Park.
- Fens, in Fens.
- Forest Hills, in Franklin Park.

Leverett pond (foot), in Leverett Park.

Neptune, in Wood Island Park, over Boston, Revere Beach & Lynn Railroad.

Scarboro pond (foot), in Franklin Park.

Wood Island (foot), in Wood Island Park.

In Charge of Public Grounds Department.

Public Garden (footbridge).

II.— BRIDGES OF WHICH BOSTON MAINTAINS THE PART WITHIN ITS LIMITS.

In Charge of Bridge Division.

Central avenue, from Dorchester to Milton.

* Chelsea [North], from Charlestown to Chelsea.

* Granite, from Dorchester to Milton.

Milton, from Dorchester to Milton.

* Neponset, from Dorchester to Quincy.

* North Beacon street, from Brighton to Watertown.

Spring street, from West Roxbury to Dedham.

* Western avenue, from Brighton to Watertown.

In Charge of Park Department.

Bellevue street, in the Riverway, over Muddy river.

Bernier Street Footbridge, over Muddy river.

Brookline avenue, in the Riverway, over Muddy river.

Huntington avenue, in the Riverway, over Muddy river.

Longwood avenue, in the Riverway, over Muddy river.

III.— BRIDGES OF WHICH BOSTON PAYS A PART OF THE COST OF MAINTENANCE.

In Charge of Bridge Division.

Albany street, over Boston & Albany Railroad (over freight tracks).

Ashmont street, junction Dorchester avenue and Talbot avenue, over N. Y., N. H. & H. Railroad, Plymouth Division (75 feet south of northerly end).

Harvard street, over N. Y., N. H. & H. Railroad, Midland Division.

Norfolk street, over N. Y., N. H. & H. Railroad, Midland Division, near Dorchester station.

In Charge of Commissioners for Cambridge Bridges.

Brookline street, from Brighton to Cambridge.

Cambridge, from Boston to Cambridge.

* Cambridge street, from Brighton to Cambridge.

* Harvard, from Boston to Cambridge.

* North Harvard street, from Brighton to Cambridge.

* Prison Point, from Charlestown to Cambridge.

* Western avenue, from Brighton to Cambridge.

IV.— BRIDGES OF WHICH BOSTON MAINTAINS THE WEARING SURFACE.

In Charge of Bridge Division.

Bennington street, over the Boston & Albany Railroad.

Blue Hill avenue, over N. Y., N. H. & H. Railroad, Midland Division.

Boston street, over N. Y., N. H. & H. Railroad, Plymouth Division.

Brookline street, Brighton to Cambridge, portion over the Boston & Albany Railroad.

Cambridge street, over Boston & Maine Railroad.

Chelsea Bridge, over Boston & Maine Railroad.

Curtis street, over the Boston & Albany Railroad.

Dorchester avenue, over N. Y., N. H. & H. Railroad, Plymouth Division.

Everett street, over Boston & Albany Railroad, Brighton.

Maverick street, over Boston & Albany Railroad.

Norfolk street, over N. Y., N. H. & H. Railroad, Midland Division, near Mattapan station.

Oakland street, over N. Y., N. H. & H. Railroad, Midland Division, Mattapan.

Perkins street (footbridge), over Boston & Maine Railroad.

Porter street, over Boston & Albany Railroad.

Prescott street, over Boston & Albany Railroad.

Prison Point, Charlestown to Cambridge, portion over the Boston & Maine Railroad.

Saratoga street, over Boston & Albany Railroad.

Silver street, over N. Y., N. H. & H. Railroad, Midland Division.

Southampton street, over N. Y., N. H. & H. Railroad, Plymouth Division.

Summer street, over N. Y., N. H. & H. Railroad, Midland Division.

Sumner street, East Boston, over Boston & Albany Railroad.

Webster street, East Boston (footbridge), Boston & Albany Railroad.

West Fourth street, over N. Y., N. H. & H. Railroad, Plymouth Division.

V.— BRIDGE MAINTAINED BY CHARLES RIVER BASIN COMMISSION.

Craigie's, Boston to Cambridge.

VI.— BRIDGE MAINTAINED BY METROPOLITAN PARK COMMISSION.

Mattapan Bridge.

VII.—BRIDGES MAINTAINED BY RAILROAD CORPORATIONS.

1st.—Boston & Albany Railroad.

Albany street (over passenger tracks).
Harrison avenue.
Market street, Brighton.
Tremont street.
Washington street.

2d.—Boston & Maine and Boston & Albany Railroads.

Main street.
Mystic avenue.

3d.—Boston & Maine Railroad, Eastern Division.

Wauwatosa avenue, East Boston.

4th.—Boston, Revere Beach & Lynn Railroad.

Everett street.

5th.—New York, New Haven & Hartford Railroad, Midland Division.

Dorchester avenue.
Morton street, Dorchester.
Washington street, Dorchester.
West Broadway.
West Fifth street.
West Fourth street.
West Second street.
West Sixth street.
West Third street.

6th.—New York, New Haven & Hartford Railroad, Plymouth Division.

Adams street.
Cedar Grove Cemetery.
Freeport street.
Medway street.
Savin Hill avenue.

7th.—New York, New Haven & Hartford Railroad, Providence Division.

Albany street. (New part.)
Baker street, West Roxbury.
Beech street, West Roxbury.
Bellevue street, West Roxbury.
Berkeley street. (New part.)
Broadway. (New part.)

Canterbury street, West Roxbury.
 Castle square.
 Centre and Mt. Vernon streets, West Roxbury.
 Columbus avenue. (New part.)
 Dartmouth street. (New part.)
 Dudley avenue, West Roxbury.
 Gardner street, West Roxbury.
 Harrison avenue. (New part.)
 Park street, West Roxbury.
 Washington street. (New part.)

RECAPITULATION OF BRIDGES.

I.	Number wholly maintained by Boston:		
	In charge of Bridge Division	55	
	In charge of Bridge and Park Departments	2	
	In charge of Park Department	17	
	In charge of Public Grounds Department	1	
		—	75
II.	Number of which Boston maintains the part within its limits:		
	In charge of Bridge Division	8	
	In charge of Park Department	5	
		—	13
III.	Number of which Boston pays a part of the cost of maintenance:		
	In charge of Bridge Division	4	
	In charge of Commissioners for Boston and Cambridge Bridges	7	
		—	11
IV.	Number of which Boston maintains the wearing surface		23
V.	Number maintained by Charles River Basin Commission		1
VI.	Number maintained by Metropolitan Park Commission		1
VII.	Number maintained by railroad corporations:		
	1. Boston & Albany	5	
	2. Boston & Maine and Boston & Albany Railroads	2	
	3. Boston & Maine, Eastern Division	1	
	4. Boston, Revere Beach & Lynn	1	
	5. New York, New Haven & Hartford, Midland Division	9	
	6. New York, New Haven & Hartford, Plymouth Division	5	
	7. New York, New Haven & Hartford, Providence Division	16	
		—	39
	Total number		163

PUBLIC LANDING PLACE.

The following public landing place has been built by the city and is maintained and controlled by the Bridge Division:

Jeffries Point, East Boston.—Size, 20 x 50. Moored from Fitzpatrick's wharf; \$250 per year.

CABLE HOUSES AND BOXES.

The following is a list of cable houses and boxes on bridges in charge of this division:

New England Telephone and Telegraph Company:

Chelsea [North] Bridge, 1 house.

Chelsea [South] Bridge, 3 boxes.

Dorchester Avenue Bridge, 3 houses and 2 boxes.

Dover Street Bridge, 2 boxes.

Malden Bridge, 2 houses and 2 boxes.

Warren Bridge, 4 boxes.

American Telephone and Telegraph Company:

Mt. Washington Avenue Bridge, 2 boxes.

Neponset Bridge, 1 box.

American District Telegraph Company:

L Street Bridge, 2 boxes.

Postal Telegraph Cable Company:

Chelsea [North] Bridge, 1 box.

Congress Street Bridge, 2 houses.

Granite Bridge, 2 boxes.

Boston Electric Light Company:

Congress Street Bridge, 2 boxes.

Boston & Northern Street Railway Company:

Chelsea [North] Bridge, 7 boxes.

Chelsea [South] Bridge, 6 boxes.

Boston Elevated Railway Company:

Cambridge Street Bridge, 1 house.

Charlestown Bridge, 2 houses and 9 boxes.

Dover Street Bridge, 2 houses.

Dorchester Avenue Bridge, 1 house and 1 box.

Malden Bridge, 2 houses and 1 box.

Summer Street Bridge, 2 boxes.

Warren Bridge, 2 houses.

Edison Electric Illuminating Company:

Charlestown Bridge, 2 houses.

Chelsea [North] Bridge, 1 box.

Chelsea [South] Bridge, 1 box.

Dover Street Bridge, 3 houses.

Automatic Fire Alarm Company:

Summer Street Bridge, 2 boxes.

Warren Bridge, 1 box.

Old Colony Street Railway Company:

Neponset Bridge, 4 boxes.

Boston Fire Department:

Chelsea [North] Bridge, 1 box.

Chelsea [South] Bridge, 1 box.

Dover Street Bridge, 1 house, 1 box.

Malden Bridge, 3 boxes.

Warren Bridge, 2 boxes.

LAND AND BUILDINGS IN CHARGE OF BRIDGE DIVISION.

South Yard and Stable.— 170 Broadway extension, South Boston — 5,516 feet of land on Broadway extension and Dorchester avenue, on which is a brick building containing an office, workshop and stable.

Atlantic Avenue Bridge.— Draw house and motor house.

Broadway Bridge.— Draw house and one storehouse.

Charlestown Bridge.— Draw house, electrical power room and six storehouses.

Chelsea [North] Bridge.— Draw house.

Chelsea [South] Bridge.— Draw house and engine house.

Congress Street Bridge.— Draw house, storehouse and two shelter houses.

Cottage Street (footbridge).— Watchman's house.

Dover Street Bridge.— Draw house and two shelter houses.

Dorchester Avenue Bridge.— Draw house, tool shed, two motor houses, one controller house.

L Street Bridge.— Draw house, engine house.

Malden Bridge.— Draw house.

Meridian Street Bridge.— Draw house.

Mt. Washington Avenue Bridge.— Tool house.

Neponset Bridge.— Tool house.

Northern Avenue Bridge.— Draw house, containing a power room and storage room for compressed air.

Summer Street Bridge.— Draw house, controller house, two shelter houses.

Warren Bridge.— Stable, draw house, containing an engine room and boiler room and a tool house.

Western Avenue Bridge to Watertown.— Tool house.

List of Small Bridges or Culverts having Wooden Tops, which are Repaired by Bridge Division.—Walls Repaired and Openings Cleaned by Sewer Department.

LOCATION.	Span, Feet.	Height of Opening, Feet.	Length, Feet.	Side Walls.	Covering.
Ashland and Canterbury streets, near Calvary Cemetery, West Roxbury.....	7.6	5.5	75	Stone....	Wood.
Beech street, near Anawan avenue, at Central Station, West Roxbury.....	4.0	4.0	50	Stone....	Wood.
Cass street, near Spring Street Station, West Roxbury.....	7.0	3.0	21	Stone....	Wood.
Cohasset street, Roslindale.....	14.0	7.5	60	Stone....	Wood.
Gardner street, near Cow Island, West Roxbury.....	5.0	5.5	33	Wood....	Wood.
Jamaica street, Jamaica Plain.....	10.0	4.0	39	Stone....	Wood.
Park street, west of Dorchester avenue, Dorchester.....	5.0	3.7	50	Stone....	Wood.
Park street, west of New York, New Haven & Hartford Railroad, Dorchester..	8.5	5.0	50	Stone....	Wood.
Spring street, near Spring Street Station, West Roxbury.	2.7	2.7	63	Stone....	Wood.
Summer street, near Spring Street Station, West Roxbury.....	4.0	4.5	40	Stone....	Wood.
Williams street, at Stony brook, West Roxbury.....	5.0	5.0	50	Wood....	Wood.
Woodman street, Jamaica Plain.....	6.3	4.0	65	Stone....	Wood.

Table Showing Width of Bridges, Kind of Roadways, Sidewalks, etc., on Tide-water Bridges, 1908.

NAME OF BRIDGE.	Width of Bridge.	ROADWAY.		SIDEWALKS.		
		Width.	Kind of Roadway.	Number.	Width.	Kind of Walks.
	<i>Ft. In.</i>	<i>Ft. In.</i>			<i>Ft. In.</i>	
Atlantic avenue.....	58 0	38 0	Paved.....	1	9 6	Granolithic and asphalt.
Broadway.....	60 0	40 0	Plank.....	2	10 0	Coal-tar concrete.
Brookline street.....	60 0	25 0 each	".....	1	10 0	Plank.
Cambridge.....	105 0	29 0	Paved.....	2	10 0	Granolithic.
Cambridge street....	40 0	32 9	Plank.....	1	6 0	Plank.
Craigie's (temporary)	49 2	40 0	".....	1	8 0	"
Charlestown.....	100 0	127 9 122 0 127 9	".....	2	10 0	Asphalt.
Chelsea [North]....	49 0	40 0	".....	1	8 0	Coal-tar concrete and plank.
Chelsea [South]....	50 3	41 2	".....	1	8 0	Plank.
* Chelsea street.....	about	about	".....			
Commercial Point...	34 0	27 0	".....			
Congress street.....	60 0	44 0	Paved.....	2	8 0	Coal-tar concrete.
Dorchester avenue...	69 0	49 0	".....	2	10 0	Asphalt.
Dover street (over water).	60 0	40 0	".....	2	10 0	"
Granite.....	30 2	24 4	Plank.....	1	5 0	Plank.
Harvard.....	69 4	51 0	".....	2	9 2	"
L street.....	60 0	44 0	Paved.....	2	8 0	Asphalt.
Malden.....	60 0 to 67 6	44 0	".....	2	8 0	Composition.
Meridian street.....	50 0	36 0	".....	2	7 0	Coal-tar concrete.
Neponset.....	30 0	23 10	Plank.....	1	5 5	Plank.
North Beacon street.	31 0	25 2	".....	1	5 0	"
North Harvard street	28 2	26 7	".....			
Northern avenue....	80 0	18 9 18 8 18 9	Paved.....	2	7 11	Asphalt.
Prison Point.....	50 0	36 0	Plank part. Paved part.	2	7 0	Coal-tar concrete.
Summer street.....	100 0	76 0	Paved.....	2	12 0	Asphalt.
Warren.....	80 0	60 0	".....	2	10 0	Coal-tar concrete.
Western avenue to Cambridge.	33 2	26 3	Plank.....	1	6 0	Plank.
Western avenue to Watertown.	33 0	24 2	".....	1	8 0	"
Winthrop.....	24 2	19 10	".....	1	3 7	"

* Under construction.

**Table Showing the Widths of Openings for Vessels in all Bridges
Provided with Draws in the City of Boston in January, 1909.**

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Atlantic avenue.....	Over Fort Point channel.....	1	42 feet 6 inches.
Boston & Maine Railroad, Eastern Division.....	Boston to Charlestown.....	1	39 " 8 "
Boston & Maine Railroad, Eastern Division.....	Over Miller's river.....	1	35 " 10 "
Boston & Maine Railroad, Fitch- burg Division.....	Boston to Charlestown.....	1	36 " 7 "
Boston & Maine Railroad, Fitch- burg Division (for teaming freight).....	" ".....	1	36 " 7 "
Boston & Maine Railroad (freight), Southern Division.....	Boston to East Cambridge....	1	39 " 10 "
Boston & Maine Railroad (passen- ger), Southern Division.....	" ".....	1	39 " 8 "
Boston & Maine Railroad, Western Division.....	Boston to Charlestown.....	1	39 " 8 "
Boston & Maine Railroad, Western Division.....	Over Miller's river.....	1	36 " 0 "
Broadway.....	Over Fort Point channel.....	1	42 " 7 "
Cambridge street.....	Brighton to Cambridge.....	1	36 " 4 "
Charlestown (main channel).....	Boston to Charlestown.....	2	50 " 0 "
Charlestown (north channel).....	" ".....	.....	49 " 9 "
Chelsea (south channel).....	Charlestown to Chelsea.....	1	38 " 9 "
Chelsea (north channel).....	" ".....	1	60 " 0 "
Chelsea street (East Boston side)..	East Boston to Chelsea.....	1	36 " 0 "
Commercial Point (or Tenean)....	Dorchester.....	1	24 " 2 "
Congress street.....	Over Fort Point channel.....	1	50 " 0 "
Craigie's (temporary).....	Boston to East Cambridge....	1	36 " 0 "
Dorchester avenue.....	Over Fort Point channel.....	1	41 " 4 "
Dover street.....	" ".....	1	40 " 0 "
Grand Junction Railroad.....	Brighton to Cambridge.....	1	39 " 0 "
Grand Junction Railroad.....	East Boston to Chelsea.....	1	60 " 0 "
Granite.....	Dorchester to Milton.....	1	36 " 0 "
Harvard (Boston side).....	Boston to Cambridge.....	2	36 " 6 "
Harvard (Cambridge side).....	" ".....	.....	36 " 10 "
L street.....	Over reserved channel, South Boston.....	1	39 " 8 "
Lock.....	Charles River dam.....	1	45 " 0 "
Malden.....	Charlestown to Everett.....	1	50 " 0 "

Table Showing Width of Openings, etc.—*Concluded.*

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Meridian street (East Boston side)	East Boston to Chelsea.....	2	59 feet 2 inches.
Meridian street (Chelsea side).....	“ “ .....	.....	59 “ 0 “
Mt. Washington avenue (Boston side).....	Over Fort Point channel.....	2	42 “ 2 “
Mt. Washington avenue (South Boston side).....	“ “ .....	.....	50 “ 0 “
Neponset.....	Dorchester to Quincy.....	2	36 “ 0 “
New York, New Haven & Hartford Railroad.....	Over Fort Point channel.....	1	41 “ 9 “
New York, New Haven & Hartford Railway, Y-connection.....	“ “ .....	.....	42 “ 0 “
New York, New Haven & Hartford Railroad, Plymouth Division....	Dorchester to Quincy.....	1	51 “ 0 “
North Beacon street.....	Brighton to Watertown.....	1	30 “ 0 “
North Harvard street.....	Brighton to Cambridge.....	1	36 “ 0 “
Northern avenue.....	Over Fort Point channel.....	2	75 “ 0 “
Prison Point.....	Charlestown to Cambridge....	1	37 “ 6 “
Summer street.....	Over Fort Point channel.....	1	50 “ 0 “
Warren.....	Boston to Charlestown.....	1	36 “ 0 “
Western avenue.....	Brighton to Cambridge.....	1	36 “ 0 “
Western avenue.....	Brighton to Watertown.....	1	35 “ 10 “

OPENING AND CLOSING HOURS FOR THE DRAWS ON THE
BRIDGES.

With the exceptions given below, all draws in bridges of the City of Boston must be open for the passage of vessels on reasonable signal at all hours.

Charlestown Bridge.

The revised ordinances of 1906 provide that the drawtender “shall not allow any vessel to pass through the draw of the Charlestown bridge, so called, except such vessels as shall be ready to go through at the following times: 6.30 a. m., 9.30 a. m., 11 a. m., 12 m., 1.30 p. m., 3 p. m., 8.30 p. m., 11.30 p. m., and from 11.30 p. m. until 6 a. m.”

Congress Street Bridge.

The same ordinances provide, "nor shall any vessel be allowed to pass through the draw of Congress Street Bridge between the hours of 6 a. m., and 8.30 a. m., or between the hours of 4.30 p. m., and 6.30 p. m."

Malden Bridge.

By authority of the Secretary of War, dated November 4, 1901, the draw in this bridge shall be opened for the passage of vessels at all hours except between the hours of 6.30 to 8.30 a. m., and 5.30 to 7.30 p. m., during which hours it shall be opened only at 7.15 a. m. and 6.30 p. m. to permit the passage of waiting vessels in either direction, and at 7.20 p. m. to permit the passing of waiting vessels going upstream.

Chelsea Bridge (North Draw).

By authority of the Secretary of War dated April 12, 1906, the draw in this bridge shall be opened at all hours for the passage of vessels of 18 feet or greater draft; for vessels of less draft, on week days, the draw must be opened at all hours except between the hours of 6.30 to 8.30 a. m. and 5.30 to 7.30 p. m. during which period the draw shall be opened only at the following times, 7 a. m., 6 p. m. and 7 p. m. On Sundays the draw must be opened upon customary signal for all vessels, at all hours.

Chelsea Bridge (South Draw).

Under authority of same date, the same regulations are established for the south draw of Chelsea bridge as the North draw, except that vessels of 13 feet or greater draft may pass at all hours, and an additional opening is provided for waiting vessels at 7.30 a. m.

DRAWTENDERS' REPORTS.

Number of Vessels Passing Through the Drawbridges Controlled by the City of Boston February 1, 1908, to January 31, 1909, Inclusive.

	STEAMERS.			SAILING VESSELS.			TUGS.			ALL OTHERS.			TOTAL NUMBER VESSELS.			Total Num-ber of Cargoes.	Total Num-ber of Openings.
	By Day.	By Night.	Total.	By Day.	By Night.	Total.	By Day.	By Night.	Total.	By Day.	By Night.	Total.	By Day.	By Night.	Total.		
Atlantic avenue.....	78	31	109	674	74	748	3,490	466	3,956	1,383	116	1,499	5,625	687	6,312	1,159	3,044
Broadway.....	77	28	105	666	81	747	3,294	412	3,706	1,574	132	1,706	5,611	653	6,264	1,238	2,200
Charlestown.....	.....	.....	.....	372	104	476	2,777	736	3,513	1,770	459	2,229	4,919	1,299	6,218	1,259	1,409
Chelsea, North.....	254	22	276	705	45	750	6,676	541	7,217	2,874	207	3,091	10,519	815	11,334	1,735	5,340
Chelsea, South.....	655	50	705	326	29	355	4,131	401	4,532	3,170	219	3,389	8,282	699	8,981	2,069	4,306
Chelsea street*.....	.....	.....	.....	.....	.....	.....	16	.....	16	10	.....	10	26	.....	26	6	14
Congress street.....	164	38	202	777	88	865	5,471	585	6,056	1,880	141	2,021	8,292	852	9,144	1,394	3,713
Dorchester avenue.....	77	33	110	675	75	750	3,511	469	3,980	1,568	123	1,691	5,831	700	6,531	1,170	3,336
Dover street.....	75	21	96	635	74	709	2,974	296	3,270	1,183	89	1,272	4,867	480	5,347	1,036	2,421
Granite.....	.....	.....	.....	12	.....	12	210	2	212	78	.....	78	300	2	302	46	170
L street.....	.....	.....	.....	204	44	248	2,918	231	3,149	2,019	333	2,352	5,141	608	5,749	874	3,868
Malden.....	.....	.....	.....	63	10	73	1,215	81	1,296	745	57	802	2,023	148	2,171	372	1,080
Meridian street.....	1,160	160	1,320	429	24	453	10,126	1,794	11,920	4,066	759	4,825	15,781	2,737	18,518	3,237	10,042
Neponset.....	.....	.....	.....	26	.....	26	370	.....	370	133	.....	133	529	.....	529	74	304
North Beacon street.....	.....	.....	.....	.....	.....	.....	73	37	110	203	116	319	276	153	429	58	112
Northern avenue†.....	37	22	59	192	33	225	2,073	485	2,558	961	256	1,217	3,263	796	4,059	604	1,768
Summer street.....	158	38	196	777	87	864	5,463	584	6,047	1,876	141	2,017	8,274	850	9,124	1,397	4,660
Warren.....	10	.....	10	377	97	474	2,648	661	3,309	1,609	397	2,006	4,644	1,155	5,799	1,079	3,286
Western avenue to Water-town.....	.....	.....	.....	.....	.....	.....	97	.....	97	78	.....	78	175	.....	175	31	97
Totals.....	2,745	443	3,188	6,910	865	7,775	57,533	7,781	65,314	27,190	3,545	30,735	94,378	12,634	107,012	18,838	51,170

* February, 1908, only. † November, December and January only.

APPENDIX B.

REPORT OF THE DEPUTY SUPERINTENDENT OF
FERRY DIVISION.

BOSTON, February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

DEAR SIR,—I respectfully submit report of income, expenditures and operation of the Ferry Division for the financial year ending January 31, 1909. The expenditures for this year show a decrease of \$45,289.43 over last year, despite the additional burden imposed by the one day off in seven law, which necessitates the employment of an extra crew.

This amount includes the payment of bills amounting to \$3,200 of the previous administration. This has been accomplished by reducing the working force without decreasing the efficiency of the service; also, by having our own mechanical force do the repair work much needed. repairs, out of the ordinary wear and tear, have been accomplished during the year.

My recommendation for the coming year is that the south pier, North Ferry, Boston side, be rebuilt, also that the repair dock at South Ferry, East Boston side, be repaired; these items will cost \$10,000.

The property in charge of this division is as follows:

South Ferry, East Boston Side.— Located at the termination of Lewis street, and covers an area of 58,725 square feet of land and water. On these premises are one head-house, with canopies, one workshop for carpenters, machinists and blacksmith, one storehouse, one new modern coal pocket, three new piers which form the two slips, two drops and tanks, one wharf and dock where boats are laid when not in use or while undergoing repairs.

South Ferry, Boston Side.— Located at the termination of Eastern avenue, and covers an area of 38,135 square feet of land and water, on which are one head-house, with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

North Ferry, Boston Side.— Located at the termination of Battery street, and covers an area of 45,000 square feet of land and water, on which are one head-house, with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

North Ferry, East Boston Side.— Located at the termination of Border street, and covers an area of 62,138 square feet of land and water, on which are one head-house, with canopies, one boiler and oil room, one coal pocket (new), three piers which form the two slips, and two drops and tanks.

The following steam ferryboats are in commission:

NAME.	When Built.	Kind.	Length.
Revere.....	1875	Side-wheel.	148 ft.
D. D. Kelly.....	1879	"	148 "
Hugh O'Brien.....	1883	"	163 "
General Hancock.....	1887	"	148 "
Noddle Island	1899	Propeller.	164 " 3 in.
Governor Russell.....	1900	"	164 " 3 "
General Sumner.....	1900	"	164 " 3 "

Respectfully submitted,

H. P. CHRISTIERNIN,

Deputy Superintendent.

STREET DEPARTMENT.—FERRY DIVISION.

CONSOLIDATED FINANCIAL STATEMENT FOR THE YEAR ENDING
JANUARY 31, 1909.

1. Receipts.

Total cash receipts during the year	\$104,244 46
Cash in hands of tollmen at beginning of year	200 00
	\$104,444 46
Cash paid over to City Collector	104,244 46
Balance of cash on hand at end of year	<u>\$200 00</u>

2. Appropriations and Expenditures.

Balance unexpended from previous years (loans),	\$15 60
Received from City Treasurer by transfer	24,023 54
Received from City Treasurer for revenue during the year	44 85
Received from City Treasurer, annual appropria- tion for this division for 1908-09	225,000 00
Total appropriations of all kinds	\$249,083 99
Total expenditures of all kinds	249,068 39
Balance unexpended (loans)	<u>\$15 60</u>

3. Result of Operations for the Year.

Receipts for the year (net income)	<u>\$104,244 46</u>
Ordinary expenses	\$249,068 39
Interest on ferry debt	17,935 00
	\$267,003 39
Depreciation of boats	\$11,807 16
Depreciation of machinery and tools	387 31
Decrease in stock of supplies	5,662 83
	17,857 30
	\$284,860 69
Increase in valuation of real estate by assessors	28,000 00
Net outgo for the year	<u>\$256,860 69</u>
Net loss for the year	<u>\$152,616 23</u>

4. Balance Sheet.

End of Fiscal Year, January 31, 1909.

ASSETS.		LIABILITIES.	
AVAILABLE ASSETS:		CURRENT LIABILITIES:	
Cash on hand.....	\$200 00	None.	
Inventory of supplies, etc., on hand.....	13,307 77		
Total available assets.....	\$13,507 77	CONTINGENT LIABILITIES:	\$15 60
CONTINGENT ASSETS:		Appropriations account.....	
City treasury, balance of appropriations.....	15 60	FIXED LIABILITIES:	
FIXED ASSETS:		Capital of the city invested in the ferries, viz.:	
Real estate and buildings ¹	² 606,400 00	Total expenditures of all	
Ferryboats ³	184,978 78	kinds for fifty-one years,	
Machinery, tools, etc.....	5,149 45	including interest on	
Total tangible assets.....	\$810,051 60	debts.....	\$10,776,753 47
Avenues, etc., East Boston ⁴	315,815 68	Less total receipts.....	6,459,902 98
Deficiency or loss by operation and maintenance			
of the ferries for fifty-one years to date.....	3,190,998 81		4,316,850 49
	\$4,316,866 09		\$4,316,866 09

¹ Original purchase of ferries \$276,375 00
 New buildings, drops, slips, etc., cost to date, 555,523 64
 Land, Lincoln's Wharf, cost, 1887 5,562 52
 Land, Battery Wharf, cost, 1893..... 10,000 00
 \$847,461 16

² Assessors' figures.

³ Total cost to date per ferry books \$618,070 58
 Less boats sold, depreciated or destroyed.... 433,091 80
 \$184,978 78

⁴ Cost (net) previous to 1870, per ferry books, viz.:
 "Expenditures for avenues" \$250,000 00
 "Expenditures" for improvements..... 65,815 68
 \$315,815 68

These expenditures were practically subsidies to the East Boston Ferry Company by the city before the ferries were purchased by the latter and should properly be added to the deficiency or loss.

5. Comparison of Receipts, Appropriations and Expenditures for Five Years.

	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
RECEIPTS.					
From foot passengers (tollmen).....	\$128,902 89	\$64,622 37	\$60,347 28	\$61,211 43	\$61,681 72
“ “ passes (office sales).....	1,073 10	606 10	668 70	578 70	440 30
“ extra passengers on team (gatemen).....	1,610 29	1,566 30	1,518 46	1,454 72	1,488 24
“ team tickets (office sales).....	1,065 00	218 50	463 00	365 00	386 50
“ strip team tickets (tollmen).....	27,322 50	26,091 50	25,813 00	26,492 50	24,088 00
“ teams (gatemen).....	13,567 37	13,514 68	13,910 98	13,836 34	14,730 19
“ City Collector for tickets.....	438 00	453 50	688 00	487 50	370 00
“ free ferries, July 4.....	1 00	1 00	1 00	1 00	1 00
Total from rates.....	\$173,980 15	\$107,073 95	\$103,410 42	\$104,427 19	\$103,185 95
From rents.....	1,324 50	1,217 67	930 66	1,009 00	414 00
“ old materials sold.....	166 25	111 47	74 90	114 00	3 25
“ other sources.....	680 30	75 00	36 96	114 36	641 26
Total ordinary receipts.....	\$176,151 20	\$108,478 09	\$104,452 94	\$105,664 55	\$104,244 46
From cash in hands of tollmen.....	.....	.....	350 00	.....	.....
Total receipts.....	\$176,151 20	\$108,478 09	\$104,802 94	\$105,664 55	\$104,244 46
Less rejected money (counterfeit, etc.).....	2 25	.....	.....	.....	.....
Total receipts turned over to city.....	\$176,148 95	\$108,478 09	\$104,802 94	\$105,664 55	\$104,244 46
APPROPRIATIONS.					
Regular appropriations.....	\$243,600 00	\$243,000 00	\$243,000 00	\$250,000 00	\$225,000 00
Special appropriations:	.....	.....	.....	.....	.....
New coal pocket, North Ferry, East Boston.....	.....	25,000 00	.....	.....	.....
Equipment of ferryboats with life apparatus.....	.....	12,000 00	.....	.....	.....
Total appropriations.....	\$243,600 00	\$280,000 00	\$243,000 00	\$250,000 00	\$225,000 00

EXPENDITURES (ORDINARY).					
Office:					
Superintendent's salary.....	\$3,000 00	\$3,000 00	\$3,000 00	\$566 67	\$2,808 79
Clerks and cashier.....	4,087 50	4,000 00	3,778 33	4,400 00	4,199 97
Stationery.....	396 89	256 45	394 79	256 18	307 09
Printing.....	868 49	734 42	1,116 86	1,273 53	1,250 05
Telephones.....	382 52	274 26	93 90	236 62	253 90
Keeping horse and repairing vehicle.....	662 56	620 60	1,379 34	394 82	220 78
Advertising, etc.....	10 50	22 75	.....	18 15	40 31
Examination of accounts, etc.....	.....	.....	200 00	.....	.....
Traveling expenses.....	.....	.....	.....	60 00	258 00
Premiums, surety companies.....	97 50	107 50	100 00	188 00	170 90
Total office expenditures.....	\$9,506 96	\$9,015 98	\$10,063 22	\$7,393 97	\$9,509 79
Ferryboats and landings:					
Employees.....	164,666 42	161,965 81	158,244 23	169,097 23	166,105 60
Fuel.....	35,701 13	47,788 67	36,669 13	45,181 13	35,042 86
Teaming, wheeling coal, etc.....	5,648 45	5,572 80	4,963 80	4,295 80	4,969 73
Oil, waste and supplies.....	8,446 14	6,972 27	9,433 26	8,329 97	7,329 56
Gas.....	967 94	867 96	455 32	392 44	654 06
Electric light.....	7,176 04	5,593 10	5,326 60	4,426 24	4,255 00
Towing by horses.....	418 25	.....	.....	.....	.....
“ electric power.....	354 50	207 40	243 40	193 34	133 66
Repairs of boats.....	15,299 12	11,022 02	21,145 72	22,231 94	13,199 81
“ buildings and drops.....	8,806 41	11,576 12	13,274 19	30,756 60	6,742 86
Furnishings, electric, etc.....	943 59	579 97	618 98	437 96	316 21
Damages.....	17 00	.....	5 00	.....	.....
Other expenditures.....	175 25	833 80	2 5,020 98	1,621 20	809 25
Total from regular appropriations.....	\$258,126 20	\$261,995 90	\$265,463 83	\$294,357 82	\$249,068 39
Carried forward.....	\$258,126 20	\$261,995 90	\$265,463 83	\$294,357 82	\$249,068 39

¹ Includes repair coal carts.

² Includes execution of court, \$4,290.73.

5. Comparison of Receipts, etc. — *Concluded.*

	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
<i>Brought forward</i>	\$258,126 20	\$261,995 90	\$265,463 83	\$294,357 82	\$249,068 39
EXPENDITURES FROM SPECIAL APPROPRIATIONS.					
New coal pocket, North Ferry.....	.....	.....	25,000 00		
Equipment of ferryboats.....	.....	11,719 37			
Total expenditures, regular and special.....	\$258,126 20	\$273,715 27	\$290,463 83	\$294,357 82	\$249,068 39
Transfers to treasury.....	.....	280 63			
Total expenditures, including transfers.....	\$258,126 20	\$273,995 90	\$290,463 83	\$294,357 82	\$249,068 39
Balances in treasury unexpended:					
From special appropriations.....	\$15 60	\$25,015 60	\$15 60	\$15 60	\$15 60

6. Comparative Balance Sheets at the Close of each Year for Five Years.

	January 31, 1905.	January 31, 1906.	January 31, 1907.	January 31, 1908.	January 31, 1909.
<i>Assets.</i>					
Cash in hands of tollmen.....	\$550 00	\$550 00	\$200 00	\$200 00	\$200 00
Accounts receivable.....	12 50				
Fuel and supplies on hand.....	4,692 23	10,236 93	4,295 14	18,970 60	13,307 77
City Treasurer (balance of appropriations).....	15 60	25,015 60	15 60	15 60	15 60
Real estate and buildings (assessors' valuations).....	577,400 00	577,400 00	573,400 00	578,400 00	606,400 00
¹ New buildings.....			25,000 00		
Ferryboats (less depreciation)..	236,924 79	222,709 30	209,346 74	196,785 94	184,978 78
Machinery and tools.....	7,595 00	6,835 50	6,151 95	5,536 76	5,149 45
Total tangible assets.....	\$827,190 12	\$842,747 33	\$818,409 43	\$799,908 90	\$810,051 60
² Cost of avenues, etc., East Boston (previous to 1870)...	315,815 68	315,815 68	315,815 68	315,815 68	315,815 68
Deficiency of assets (loss).....	2,428,943 34	2,620,543 31	2,823,306 28	3,038,382 58	3,190,998 81
Totals.....	<u>\$3,571,949 14</u>	<u>\$3,779,106 32</u>	<u>\$3,957,531 39</u>	<u>\$4,154,107 16</u>	<u>\$4,316,866 09</u>
<i>Liabilities.</i>					
Capital invested by City of Boston to date.....	\$3,571,933 54	\$3,754,090 72	\$3,957,515 79	\$4,154,091 56	\$4,316,850 49
Appropriations account (credit balances).....	15 60	25,015 60	15 60	15 60	15 60
Total liabilities.....	<u>\$3,571,949 14</u>	<u>\$3,779,106 32</u>	<u>\$3,957,531 39</u>	<u>\$4,154,107 16</u>	<u>\$4,316,866 09</u>

Detail of Capital Invested by the City of Boston.

Total expenditures to date, per ferry books.....	\$9,252,299 07	\$9,542,934 34	\$9,849,968 17	\$10,152,247 67	\$10,419,391 06
Interest on debt for the year (per City Auditor).....	16,920 00	16,920 00	18,114 18	18,075 00	17,935 00
Interest previous years, etc. (net debits per Auditor).....	279,148 85	279,148 85	279,148 85	279,148 85	279,148 85
Total expenditures.....	<u>³\$9,548,367 92</u>	<u>³\$9,839,003 19</u>	<u>³\$10,147,231 20</u>	<u>³\$10,449,471 52</u>	<u>³\$10,716,474 91</u>
Deduct total receipts paid to Collector.....	<u>³5,976,434 38</u>	<u>³6,084,912 47</u>	<u>³6,189,715 41</u>	<u>³6,295,379 96</u>	<u>³6,399,624 42</u>
Excess of expenditure, viz., capital invested by city.....	\$3,571,933 54	\$3,754,090 72	\$3,957,515 79	\$4,154,091 56	\$4,316,850 49

¹ Included in real estate and buildings by assessors.² See footnote 4 under Table 4.³ Auditor's figures for total expenditures and receipts are \$60,278.56 more than above, the difference (capital invested) being the same; \$3,542.50 for additional interest and \$33 counted twice on total of ferry books have also been included in these figures.

Total Expenditures upon Ferries since 1858-59.

¹ Expenditures for avenues, paving, interest, etc., previous to purchase of the ferries by the city	\$444,101 30
Purchase of ferries, April, 1870	276,375 00
² Expenditures for ferryboats since April, 1870, ...	618,070 58
² Expenditures for new buildings, piers, drops, etc.	555,523 64
² Expenditures for tools and fixtures	14,752 46
Expenditures for land from Lincoln's Wharf in 1887	5,562 52
Expenditures for land from Battery Wharf in 1893	10,000 00
Total expenditures on capital account	\$1,924,385 50
² Expenditures for repairs of all kinds	918,279 37
² Expenditures for fuel	1,399,567 74
² Expenditures for salaries and wages	4,880,195 69
Expenditures for all other purposes	1,654,325 17
	<u>\$10,776,753 47</u>

Total Receipts from Ferries since 1858-59.

Receipts from rents, etc., previous to purchase of ferries	\$29,588 56
² Receipts from ferry tolls since purchase of ferries	6,174,170 87
² Receipts from rents since purchase of ferries, ...	62,247 79
² Receipts from sales of ferryboats	147,331 21
² Receipts from all other sources, per ferry books	16,211 73
Receipts from all other sources, additional, per auditor	30,690 00
	\$6,460,240 16
Less rejected money destroyed . . . \$104 18	
Less amount counted twice 33 00	
Less amount in hands of tollmen 200 00	
	337 18
Total, per auditor's figures	<u>\$6,459,902 98</u>

¹ See footnote 4 under Table 4.² According to books of the Ferry Division.

REGULAR ANNUAL (ORDINARY) AND SPECIAL APPROPRIATIONS
(EXTRAORDINARY) OF THE FERRY DIVISION OF THE
STREET DEPARTMENT FOR THE YEAR ENDING JANUARY
31, 1909.

Appropriation for the year ending January 31, 1909	\$225,000 00
Received by transfer	24,068 39
Total amount	\$249,068 39
Amount of expenditures	\$249,068 39

SPECIAL APPROPRIATIONS.

Appropriation authorized and issued May 27, 1902, for ferry improvements	\$100,000 00
Amount expended from May 27, 1902, to February 1, 1909	99,984 40
Unexpended balance of appropriation January 31, 1909	\$15 60

STATEMENTS SHOWING RECEIPTS AT EACH FERRY.

North Ferry.

FROM TOLLMEN.	Foot Passengers.	Team Tickets.	Total.
East Boston side.....	\$16,886 71	\$9,506 00	\$26,392 71
Boston side.....	17,808 33	5,470 50	23,278 83
	\$34,695 04	\$14,976 50	\$49,671 54

From tollmen	\$49,671 54
From gatemen:	
For 82,606 foot passengers at 1 cent,	\$826 06
For cash fares for teams	7,371 90
	8,197 96
Total at North Ferry	\$57,869 50

South Ferry.

FROM TOLLMEN.	Foot Passengers.	Team Tickets.	Total.
East Boston side.....	\$13,230 99	\$3,208 00	\$16,438 99
Boston side.....	13,755 69	5,903 50	19,659 19
	<u>\$26,986 68</u>	<u>\$9,111 50</u>	<u>\$36,098 18</u>

From tollmen \$36,098 18

From gatemen:

For 66,218 foot passengers at 1 cent, . \$662 18

For cash fares for teams . . . 7,358 29

8,020 47

Total at South Ferry \$44,118 65

North and South Ferries, as above . . . \$101,988 15

Tickets paid for at office of City Collector . . 370 00

Tickets paid for at office of Ferry Division . . 826 80

Received in lieu of free ferries July 4, 1908 . 1 00

Total ferriage receipts \$103,185 95

Rents for the year 414 00

Sales of old material \$3 25

Public telephone 41 26

Head-house privileges 600 00

644 51

Total cash receipts, as above \$104,244 46

STATEMENT SHOWING THE DIFFERENCE OF TRAVEL ON THE
FERRIES FROM FEBRUARY 1, 1908, TO FEBRUARY 1, 1909.

	North Ferry.	South Ferry.
Foot passengers at 1 cent each . . .	3,552,110	2,764,886
Foot passengers by ticket . . .	45,716	22,985
Foot passengers free . . .	20,380	4,495
Total foot passengers . . .	<u>3,618,206</u>	<u>2,792,366</u>
One-horse teams and pleasure car- riages	351,632	260,535
Two-horse teams	126,411	88,161
Three-horse teams	5,993	2,269
Four-horse teams	4,669	6,819
Carried forward	<u>488,705</u>	<u>357,784</u>

	North Ferry.	South Ferry.
<i>Brought forward</i>	488,705	357,784
Two-horse pleasure carriages and hacks, ...	20,025	10,695
Handcarts, etc.	4,022	1,036
Drag-wheels	13	16
Free teams	5,052	693
 Total teams	 <u>517,817</u>	 <u>370,224</u>

TOTAL TRAVEL ON BOTH FERRIES FROM FEBRUARY 1, 1904,
TO FEBRUARY 1, 1909.

	From Feb. 1, 1904, to Feb. 1, 1905.	From Feb. 1, 1905, to Feb. 1, 1906.	From Feb. 1, 1906, to Feb. 1, 1907.	From Feb. 1, 1907, to Feb. 1, 1908.	From Feb. 1, 1908, to Feb. 1, 1909.
One-horse teams.....	650,687	626,518	634,839	608,744	612,167
Two-horse teams.....	254,726	225,361	225,024	238,911	214,572
Three-horse teams.....	9,605	9,169	10,409	8,091	8,262
Four-horse teams.....	12,931	11,678	11,547	16,897	11,488
Two-horse carriages and hacks. .	19,968	21,728	18,571	26,381	30,720
Two-cent tolls for handcarts, etc.....	4,560	4,518	4,936	5,251	5,058
Drag-wheels, etc.....	32	88	41	23	29
Total teams at both ferries...	952,509	899,060	905,367	904,298	882,296
Total foot passengers.....	13,200,033	6,708,152	6,292,393	6,353,101	6,385,697

TICKET STATEMENT FOR THE YEAR 1908-09.

	Balance outstanding Jan. 31, 1908.	Sold during the year.	Delivered on Requisitions.	Total.	Received and Destroyed.	Balance outstanding Jan. 31, 1909.
Foot passes.....	229,157	44,030	17,250	290,437	68,701	221,736
One-horse team tickets.....	89,962	324,512	1,504	415,978	321,958	94,020
Two-horse team tickets.....	57,465	191,648	384	249,497	190,398	59,099
Three-horse team tickets....	5,783	6,858	54	12,695	6,896	5,799
Four-horse team tickets.....	7,984	10,380	.....	18,364	10,466	7,898
One-horse carriage tickets....	22,739	14,200	20	36,959	14,300	22,659
Two-horse carriage tickets...	2,477	7,820	.....	10,297	7,651	2,646

LIST OF CONTRACTS IN FERRY DIVISION FROM FEBRUARY 1, 1908,
TO JANUARY 31, 1909.

DATE.	Awarded to	Contract.	Amount Paid.
April 9	Spring Coal Company..	2,314 tons coal.....	\$8,275 50
April 21	William McKie.....	Repairing guards and stern posts of ferryboat "General Sumner".....	525 00
May 1	Atlantic Works.....	Furnishing four manganese bronze propeller blades, machined, ready to install (four old blades in part payment).....	328 00
May 11 1908	Patrick J. Griffin.....	Hauling coal from sheds to boats.....	* 1,514 98
Aug. 16	Atlantic Works.....	Repairing pistons and rods and other machinery on ferryboat "General Sumner".....	325 00
Sept. 8	Isaac Blair & Co.....	Raise up and lower drop at South Ferry, East Boston side.....	90 00
Sept. 23	Atlantic Works.....	New piping from boiler to radiators and new trap in head-house, North Ferry, Boston side.....	237 00
Nov. 23	Betts Brothers & Co...	Raise and float ferryboat "Revere" sunk in dock.....	600 00
Dec. 26	Lawler Brothers.....	Repairing piers at Boston side, North and South ferries.....	230 00
Jan. 9	Frank Ridlon Company,	New controller on motor at South Ferry, Boston side.....	195 00

* 25 cents per ton.

APPENDIX C.

REPORT OF THE DEPUTY SUPERINTENDENT OF
LAMP DIVISION.

BOSTON, MASS., February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

DEAR SIR,—The annual report of the Lamp Division for the year 1908 is herewith submitted.

This division has supervision of the lighting, care and maintenance of the various types of electric, gas and naphtha lamps in use by the city for illuminating the streets, alleys, parks and squares, the setting up of all new lamps in the streets and the placing of glass street signs and numbers in the lanterns.

There was appropriated for this division for the financial year ending January 31, 1909, the sum of \$800,000, and there was received from revenue credited to the division the sum of \$23.75, but owing to circumstances that were unavoidable this amount was exceeded and a transfer was made from another appropriation to that of this division to the amount of \$9,500, making a total credit of \$809,523.75.

The expenditures amounted to \$809,510.06, thus leaving a balance of \$13.69 unexpended.

It had been anticipated that a contract for lighting the gas and naphtha lamps would have been made at a much earlier date than that finally decided upon and that a very substantial reduction in prices would also be made, thus allowing the division to live within the sum appropriated.

After experimenting for a year under the system of lighting the gas and naphtha lamps by means of municipal employees, leasing the lanterns and fixtures and paying for repairs and renewals, purchasing gas direct from the gas company and naphtha from the producers at the market rate, it was deemed advisable, it having been demonstrated that the work could be carried on much cheaper, to return to some form of a contract system.

On June 1, 1908, the following notice was published in various papers and journals throughout the country:

CITY OF BOSTON.— Notice to Bidders.— GAS AND NAPHTHA LIGHTING — The Superintendent of Streets of the City of Boston, Office 47, City Hall, invites proposals for lighting with gas and naphtha incandescent mantle burners on such streets, parks and alleys as may from time to time be designated by the Superintendent for five years, from August 1, 1908. The present number of gas lamps is about 10,500, and the number of naphtha lamps about 1,400. The city will furnish the posts and service pipes. The bidders must state a price per lamp per annum for each of the following lamps or clusters:

- 1 — For single gas incandescent burners.
- 2 — For single gasolene or naphtha incandescent burners.
- 3 — For a lantern with two gas incandescent burners.
- 4 — For a lantern with three gas incandescent burners.
- 5 — For a cluster of two lanterns with one gas incandescent burner each.
- 6 — For a cluster of two lanterns with two gas incandescent burners each.
- 7 — For a cluster of three lanterns with one gas incandescent burner each.
- 8 — For a cluster of three lanterns with two gas incandescent burners each.

In the case of the gas lamps, the bids may include the furnishing of the gas as well as the furnishing, maintenance and lighting of the lamps; or, in the alternative, may be confined to the furnishing, maintenance and lighting of the lamps, the city to furnish the gas. Only proposals obtained at said office, filled out, signed by the bidder and left at said office on or before 12 o'clock m. of WEDNESDAY, July 1, 1908, with a certified check for \$5,000, payable to and to be the property of the city if the proposal is not carried out, will at said hour and place be publicly opened and read. The successful bidder will be required to furnish in the sum of \$100,000 a bond of a surety company authorized to do business in the State of Massachusetts. Samples of the equipment, including lanterns, burners, etc., must be submitted with the bid. The Superintendent reserves the right to reject any and all proposals should he deem it for the interest of the city so to do, and to give preference to the proposals of bidders agreeing to pay the trades unions' rate of wages.

GUY C. EMERSON, Superintendent of Streets.

On the opening of the proposals on July 1 it was found that there were three bidders and a canvass of the proposals resulted as follows:

Lighting the Streets, Parks and Alleys with Gas, Naphtha or Gasolene Incandescent Lamps. Bids Opened Wednesday, July 1, 1908, at 12 m.

NAME OF BIDDER.	1.	2.	3.	4.	5.	6.	7.	8.	
	Single Gas Incandescent Burners. Price per Year.	Single Gasolene or Naphtha Incandescent Burners. Price per Year.	A Lantern with Two Gas Incandescent Burners. Price per Year.	A Lantern with Three Gas Incandescent Burners. Price per Year.	A Cluster of Two Lanterns with One Gas Incandescent Burner. Each. Price per Year.	A Cluster of Two Lanterns with Two Gas Incandescent Burners. Each. Price per Year.	A Cluster of Three Lanterns with One Gas Incandescent Burner. Each. Price per Year.	A Cluster of Three Lanterns with Two Gas Incandescent Burners. Each. Price per Year.	
The Cleveland Street Lighting Company (with gas)..... By E. S. Newbold, Vice President, Baltimore, Md.	\$24 90	\$30 25	\$37 60	\$51 00	\$47 50	\$73 20	\$68 00	\$105 40	Fire Alarm Lamps, \$10 per Year per Lamp.
Rising Sun Street Lighting Co. (with gas)..... By P. J. Fitzgerald, President, Boston, Mass.	25 20	29 20	36 80	49 20	48 00	71 60	69 00	106 80	Fire Alarm Lamp, \$25.* Fire Alarm Lamp, \$17.40.†
Sunlight Illuminating Company, By S. S. Lesslie, Jr., President, Pittsburgh, Pa.	* 27 00 † 17 40	* 28 00	* 54 00 † 34 80	* 60 80 † 36 00	* 54 00 † 34 80	* 107 00 † 68 60	* 81 00 † 52 50	* 160 00 † 102 40	

NOTE.— The Sunlight Illuminating Company further agrees to sell the lanterns erected as part of this contract to the City of Boston at the termination of this contract for 50 per cent of the cost price of said lanterns. Invoices and affidavits to be filed as to said cost immediately upon the completion of the installation of the lanterns, and the acceptance of this provision to be made one year before the termination of said contract should the Sunlight Illuminating Company be the successful bidder.

* Includes gas supply.

† Not including gas supply.

	1.	2.	4.	
	10,635.	1,462.	199.	Total.
	Single Mantle Gas.	Single Mantle Naphtha.	Three Mantle Gas.	
The Cleveland Street Lighting Company,	\$264,811 50	\$44,225 50	\$10,149 00	\$319,186 00*
Rising Sun Street Lighting Company...	268,002 00	42,690 40	9,790 80	320,483 20*
Sunlight Illuminating Company.....	287,145 00	40,936 00	12,099 20	340,180 20*
Street Department, Lamp Division....	303,751 50	43,465 26	11,127 16	358,343 92†

* With gas.

† Does not include office or inspection expense.

The bids were taken under advisement and after due consideration were rejected. Later on, in view of the facts that more time was needed to arrange for new specifications, that additional time should be given to the investigation of any new type of lamp or improvements that might develop along the line of efficiency or economy in street lighting methods, that the Rising Sun Street Lighting Company had all of its equipment already on the streets and ways of the city and that a saving could be made, a temporary contract was entered upon with the above company under authority of the Mayor, without inviting proposals, for the term of one year from September 15, 1908, deducting the sum of \$9.60, the price paid per lamp per year for gas by the above company, and which is now furnished by the city at a less price under an arrangement with the gas companies.

The schedule of prices agreed upon under this new arrangement is as follows:

Schedule of Prices.

KIND OF LAMP.	Price per Annum.
Single gas incandescent burners.....	\$15 60†
Single gasoline or naphtha incandescent burners.....	29 20*
A lantern with two gas incandescent burners.....	17 60†
A lantern with three gas incandescent burners.....	20 40†
A cluster of two lanterns with one gas incandescent burner each.....	28 80†
A cluster of two lanterns with two gas incandescent burners each.....	33 20†
A cluster of three lanterns with one gas incandescent burner each.....	40 20†
A cluster of three lanterns with two gas incandescent burners each.....	49 20†

* Including naphtha.

† Without gas.

The above schedule of prices, plus the cost of gas per lamp per year, provided by the city, would make the total cost per lamp as follows:

KIND OF LAMP.	PRICE PER ANNUM.	
	Boston Gas.	East Boston Gas and Charlestown Gas.
A lantern with one burner.....	\$24 96	\$26 40
A lantern with two burners.....	36 32	39 20
A lantern with three burners.....	48 48	52 80
Two lanterns with one burner each.....	47 52	50 40
Two lanterns with two burners each.....	70 64	76 40
Three lanterns with one burner each.....	68 28	72 60
Three lanterns with two burners each.....	105 36	114 00

By mutual consent the contract for incandescent lighting between the city and the Edison Electric Illuminating Company which was to have continued until June 1, 1909, was canceled, taking effect on and after April 1, 1908, with the written understanding and condition that bills for service provided for in said contract should, during the remainder of the term, be rendered and settled on the regular municipal lighting schedules of the company, a separate bill to be rendered for each meter. A result of the above change of rates has been a reduction in the cost to the city departments as a whole for this class of lighting.

On April 2, 1909, an arrangement went into effect whereby the Edison Company agreed to maintain and repair the electric light cables owned by the city in the different parkways, also the overhead system at Castle Island, without expense to the city; the company to cancel the unpaid bills against the city for maintenance and repair of the said cables and the city agreeing to pay during the life of the contract, concerning the street and park lighting of the city, the rates fixed by the said contract, without the deduction of one cent per lamp per night which had been made under the former arrangement for such lamps as were connected with the city cables.

In September a notice to contractors for street lighting and manufacturers of street lighting apparatus was published, inviting such parties having apparatus adapted to systems other than the present system of low pressure gas mantles to demonstrate therewith, if they so desired, during the continuance of the present contract for street lighting, with a view to the improvement of the present system upon the expiration of the present contract on September 15, 1909.

Various types of arc, incandescent electric lamps, vertical mantle and inverted mantle gas lamps and automatic lighting devices have been demonstrated with on the streets and are now in process of investigation and being experimented with.

A more brilliant illumination of the important thoroughfares, business streets and public squares is needed, as it is a factor in the improvement in the social, moral and business conditions of the city that should not be overlooked. Considerable correspondence and investigation have been conducted in relation to improved and ornamental posts and fixtures together with other new lighting processes that have been brought to the attention of the division, and a large amount of data has been obtained. A more ornamental lamp-post on certain prominent thoroughfares and squares is desirable. The design of such a post should be the subject of careful study and consideration. A post carefully proportioned and of a decorative but not too ornate design could be used to advantage.

A mast-arm type of post is also needed, or a cross-suspension lamp fixture, at many important street intersections or on such streets where the foliage overhanging both roadway and sidewalk requires a better distribution of light than can be obtained by the use of the ordinary post.

The discontinuance of all of the naphtha street lamps having been determined upon on account of the excessive rate paid per lamp, and in order to obtain a more efficient lighting service in the districts supplied with these lamps, the substitution of either mantle gas lamps, where gas mains were laid, or with the Tungsten series lamps, principally the latter type of lamp, has been in progress. A considerable reduction in the yearly cost of maintenance will be obtained by this change when the work of installation is completed. It has been found that the Tungsten lamp with radial reflector gives a very satisfactory illumination upon those streets in which it has been installed. Tests made on the street to determine the value of the illumination from these lamps have

shown a distinct gain over the former method by an increase in the intensity of the useful light thrown upon the area to be lighted.

In order that the citizens residing in the Germantown District could receive the benefit of gas service, the gas company was prevailed upon to extend its mains throughout that district, including the new state highway. Work was commenced late in the fall on the installation of mantle gas lamps in the above district, and it will be completed this spring.

The work done by the division in the installation of new lamps and repairs and alterations of services and posts has been conducted as follows:

There have been 207 naphtha lamps changed to mantle gas lamps where the gas company have extended their mains. One hundred and eighty-eight new single mantle gas lamps have been set up and one new triple mantle gas lamp installed. Five gas lamps that were out temporarily have been relighted and four have been replaced that were discontinued. Two triple mantle gas have been changed to single mantle gas lamps. One new naphtha lamp has been set up and one replaced. Twelve double mantle naphtha have been changed to single mantle naphtha lamps.

Care has been assumed of four new fire-alarm signal lamps. Thirteen new arc lamps have been installed and temporary arc lamps have been provided during the skating season at Wood Island, North Brighton and Jamaica Pond.

Thirty gas lamps, 74 single mantle and 4 double mantle naphtha lamps and 9 arc lamps have been discontinued and removed.

On account of the extension and repair of the Traverse Street Subway eight 16 c. p. lamps were removed and fifteen 16 c. p. lamps were newly installed.

Twelve 40 c. p., twenty 60 c. p. and one 80 c. p. new Tungsten lamps have been installed on the streets, and ten 32 c. p. carbon lamps have been changed to 60 c. p. Tungsten.

The total number of lamps of all types, set up, relighted and replaced during the year is 427. The total number of lamps discontinued is 287, a total net increase of 140.

Changes in locations of 16 gas, 46 naphtha and 6 arc lamp-posts have been made on account of street construction, building operations or grade changes.

Two hundred and twelve lamp-posts have been set for the various types of lamps, and 48 incandescent fixtures have been put up; 1 naphtha and 33 gas lamp-posts that were

broken by teams or other causes have been removed and new posts set; 4 gas and 3 naphtha lamp-posts have been set in place of bracket fixtures.

Fifty-six gas, 36 naphtha and 7 arc lamp-posts have been straightened; 77 gas, 11 naphtha and 5 arc lamp-posts have been reset to line and grade; 19 gas, 60 naphtha and 2 arc lamp-posts that have been discontinued were removed from the streets; 12 gas brackets have been removed from buildings; 1 lamp-post has had the spindle recalked.

Four hundred and eighteen new service pipes have been laid, and 42 have been removed and cut off from the main pipes; 12 services have been reconnected with new mains, and 159 renewed or relaid that were trapped or otherwise affected by street changes; 56 leaks in services were repaired; 21 risers renewed or shortened; 12 risers were removed, and 501 services were cleared.

The number of glass street signs that have been placed in the lanterns is 796, and also 270 numbers; glass shades have been placed in the gas lanterns when requested.

Tables showing the expenditures of the division, the total number of lamps of various types installed, the contract prices paid per lamp per annum, the increase or decrease of the lamps, an inventory of property, and copies of the lighting contracts, etc., are annexed.

Respectfully submitted,

EDWARD C. WADE,

Deputy Superintendent.

GAS LIGHTING.

There are 11,061 single mantle gas lamps in use, 179 triple mantle gas, 19 triple mantle police lamps in front of stations, and 192 open flame fire-alarm signal lamps.

The city furnishes and provides for the setting of the lamp-posts, has service pipes laid from the gas main to the top of the post, maintains all such pipes and posts in good condition and repair, furnishes the gas, contracts for lanterns, burners, other necessary equipment and labor for lighting and care.

The division pays for the cost of gas, lighting and care for the fire-alarm lamps, and the cost of repairs and setting up of posts is assumed by the Fire Department.

Gas Lamps.

COMPANY.	Number of Lamps.	Type of Lamp.	Rated Candle Power.	Gas Consumed per Lamp per Hour.	Hours of Burning per Annum.	Cost of Gas per M.	Cost of Gas per Lamp per Annum.	Cost per Lamp for Lighting, Care and Repair per Annum.	Total Cost per Lamp per Annum.
Boston Consolidated.....	10,009	Single mantle.	60	3 feet.	4,000	\$0.78	\$9.36	\$15.60	\$24.96
	173	Triple mantle.	180	9 feet.	4,000	.78	28.08	20.40	48.48
	167	Open flame.	.....	4 feet.	3,828	.78	12.36	15.60	27.96
Charlestown.....	521	Single mantle.	60	3 feet.	4,000	.90	10.80	15.60	26.40
	12	Open flame.	.....	3 feet.	4,000	.90	10.80	15.60	26.40
	531	Single mantle.	60	3 feet.	4,000	.90	10.80	15.60	26.40
East Boston.....	6	Triple mantle.	180	9 feet.	4,000	.90	32.40	20.40	52.80
	13	Open flame.	.....	4 feet.	3,828	.90	13.78	15.60	29.38

NAPHTHA LIGHTING.

There are 1,179 single mantle naphtha lamps in use.
The city furnishes and provides for the setting of the lamp-posts, contracts for lanterns and necessary equipment, naphtha, and labor for lighting and care.

COMPANY.	Number of Lamps.	Type of Lamp.	Rated Candle Power.	Hours Burning per Annum.	Contract Price for Lighting, Care, Repair and Naphtha per Annum.
Rising Sun Street Lighting Company.....	1,179	{ Single mantle. }	60	3,828	\$29 20

ELECTRIC LIGHTING.

There are 3,800 inclosed arc lamps in use, 43 Tungsten series lamps, 38 carbon filament lamps.
The companies provide and set the lamp-posts, furnish lamps, wires, cables and all other necessary equipment, and maintain them in good condition and repair.

Arc Lamps.

COMPANY.	Number of Lamps.	Connected.	Type of Lamp.	Type of Circuit.	WATTS.		Lighting Hours.	Cost per Lamp per Annum.
					At Terminal.	At Arc.		
Edison Electric Illuminating Company.....	{ 1,458	Overhead.	Inclosed.	Series 6.6 amp. D. C.	500	483	3,828	\$118 39
	{ 1,728	Underground.	Inclosed.	Series 6.6 amp. D. C.	500	483	3,828	118 39
	{ 15	Underground.	Inclosed.	Multiple 5 amp. D. C.	550	400	3,828	118 39
	{ 3	Underground.	Inclosed.	Multiple 7.5 amp. A. C.	550	443	3,828	118 39
Boston Consolidated Gas Company.....	{ 308	Overhead.	Inclosed.	Series 7.5 amp. A. C.	500	471	3,828	124 10
	{ 23	Underground.	Inclosed.	Series 7.5 amp. A. C.	500	471	3,828	124 10
Charlestown Gas and Electric Company.....	{ 222	Overhead.	Inclosed.	Series 6.6 amp. D. C.	500	483	3,828	127 75
	{ 43	Underground.	Inclosed.	Series 6.6 amp. D. C.	500	483	3,828	127 75

Incandescent Lamps.

COMPANY.	Number of Lamps.	Type of Lamp.	Type of Circuit.	Watts.	Candle Power.	Lighting Hours.	Cost per Lamp per Annum.
Edison Electric Illuminating Company.....	{ 12	Tungsten.	Series 6.6 amp. D. C.	50	40	3,828	\$20 37
	{ 30	Tungsten.	Series 6.6 amp. D. C.	75	60	3,828	23 48
	{ 1	Tungsten.	Series 6.6 amp. D. C.	100	80	3,828	29 71
	{ 15	Carbon.	Mutiple 113 volts.	—	16	Meter.	—
Boston Consolidated Gas Company.....	{ 7	Carbon.	Series 6.6 amp. D. C.	—	32	3,828	23 48
	{ 14	Carbon.	Multiple 113 volts.	—	32	3,828	36 00
Boston & Albany.....	2	Carbon.	Multiple 113 volts.	—	32	Meter.	—

The following table shows the number of lamps of the various types in use on January 1, 1909, as compared with the number in use in January, 1908:

	January, 1909.	January, 1908.	Increase or Decrease.
Mantle gas.....	11,061	10,685	+376
Mantle naphtha.....	1,179	1,446	—267
Electric arc.....	3,800	3,796	+4
Incandescent carbon.....	38	41	—3
Incandescent Tungsten.....	43	.....	+43
Fire alarm.....	192	188	+4
Triple mantle gas.....	179	180	—1
Triple mantle police.....	19	19	.....
Double mantle naphtha.....	.....	16	—16
	16,511	16,371	+140

LIGHTING SCHEDULE.

The following table shows the time of lighting and extinguishing the gas lamps for the different months of the year:

DATE.		Light at. P. M.	Put Out. A. M.	Number of Hours Burning.
January	10 to 14.....	4.15	6.00	13 $\frac{1}{3}$
	15 to 21.....	4.30	6.00	13 $\frac{1}{2}$
	22 to 31.....	4.45	6.00	13 $\frac{1}{4}$
February	1 to 4.....	4.45	6.00	13 $\frac{1}{4}$
	5 to 9.....	5.00	6.00	13
	10 to 11.....	5.00	6.00	13
	12 to 25.....	5.15	5.45	12 $\frac{1}{2}$
	26 to 28.....	5.30	5.30	12
March	1 to 9.....	5.30	5.30	12
	10 to 26.....	6.00	5.00	11
	27 to 31.....	6.15	4.30	10 $\frac{1}{4}$
April	1 to 9.....	6.15	4.30	10 $\frac{1}{4}$
	10 to 23.....	6.30	4.15	9 $\frac{3}{4}$
	24 to 30.....	6.45	4.00	9 $\frac{1}{4}$
May	1 to 6.....	6.45	4.00	9 $\frac{1}{4}$
	7 to 9.....	7.00	3.30	8 $\frac{1}{2}$
	10 to 21.....	7.00	3.30	8 $\frac{1}{2}$
	22 to 31.....	7.00	3.00	8
June	1 to 3.....	7.00	3.00	8
	4 to 9.....	7.15	3.00	7 $\frac{3}{4}$
	10 to 30.....	7.15	3.00	7 $\frac{3}{4}$
July	1 to 9.....	7.15	3.00	7 $\frac{3}{4}$
	10 to 31.....	7.15	3.00	7 $\frac{3}{4}$
August	1 to 9.....	7.00	3.15	8 $\frac{1}{4}$
	10 to 21.....	7.00	3.15	8 $\frac{1}{4}$
	22 to 31.....	6.30	3.45	9 $\frac{1}{4}$

LIGHTING SCHEDULE.—*Concluded.*

DATE.	Light at. P. M.	Put Out. A. M.	Number of Hours Burning.
September 1 to 9.....	6.30	3.45	9 $\frac{1}{4}$
10 to 11.....	6.30	3.45	9 $\frac{1}{4}$
12 to 19.....	6.00	4.00	10
20 to 30.....	5.45	4.15	10 $\frac{1}{2}$
October 1 to 9.....	5.30	4.30	11
10 to 22.....	5.15	4.45	11 $\frac{1}{2}$
23 to 31.....	4.45	5.00	12 $\frac{1}{4}$
November 1 to 9.....	4.30	5.00	12 $\frac{1}{2}$
10 to 25.....	4.15	5.15	13
26 to 30.....	4.15	5.45	13 $\frac{1}{2}$
December 1 to 9.....	4.00	5.45	13 $\frac{3}{4}$
10 to 24.....	4.00	5.45	13 $\frac{3}{4}$
25 to 31.....	4.15	6.00	13 $\frac{3}{4}$
January 1 to 9.....	4.15	6.00	13 $\frac{3}{4}$

OUTAGES ON STREET LAMPS.

The number of lamps reported not lighted on schedule time or out before the proper time have been as follows: 4,604 electric lamps, 1,593 gas lamps and 2,034 naphtha lamps — a total of 8,231 lamps.

DATE.	ARC.			Totals.
	Edison.	Brookline.	Charlestown.	
February.....	\$110 16	\$11 33	\$3 38	\$124 87
March.....	96 90	3 10	.....	100 00
April.....	174 42	2 36	.....	176 78
May.....	45 22	1 44	8 10	54 76
June.....	40 80	3 01	7 90	51 71
July.....	54 40	.....	.....	54 40
August.....	42 84	89	.....	43 73
September.....	90 44	75	.....	91 19
October.....	.....	.....	.....	.....
November.....	65 96	83	3 63	70 42
December.....	28 90	.....	.....	28 90
January, 1909.....	40 12	97	14 78	55 87
Totals.....	\$790 16	\$24 68	\$37 79	\$852 63

Underground Work.

	Set for New Lamps.	Set in Place of Broken Ones.	Set in Place of Brackets.	Shift to New Location.	Straight- ened.	Reset to Line and Grade.	Removed.	Repaired.	Laid.	Relaid.	Recon- nected.	Cleared.
Gas posts.....	192	33	4	16	56	77	19	1	—	—	—	—
Naphtha posts.....	2	1	3	46	36	11	60	—	—	—	—	—
Electric posts.....	13	—	—	6	7	5	2	—	—	—	—	—
Gas brackets.....	—	—	—	—	—	—	12	—	—	—	—	—
Incandescent fixtures..	48	—	—	—	—	—	—	—	—	—	—	—
Naphtha brackets....	—	—	—	—	—	—	—	—	—	—	—	—
Fire-alarm posts.....	5	—	—	—	—	—	—	—	—	—	—	—
Services.....	—	—	—	—	—	—	42	56	418	159	12	501
Risers.....	—	—	—	—	—	—	12	—	—	21	—	—

EMPLOYEES.

There are eight men employed in the division as follows: Deputy superintendent, clerk, messenger, four inspectors and one watchman.

The lamplighters are all employed by the lighting company having the contract with the city.

INVENTORY OF PROPERTY ON HAND JANUARY 1, 1909.

- 1 horse.
- 2 sets of single harness.
- 1 buggy.
- 1 democrat wagon.
- 2 whips.
- 1 rubber mat.
- 4 blankets.
- 5 robes.
- 1 halter.
- 1 test meter.
- 1 lot of small tools.
- 1 100-foot tape measure.
- 200 stakes.
- 5,000 flat glass street signs.
- 1,137 bent glass street signs for No. 38 lantern.
- 64 bent glass street signs for No. 37 lantern.
- 232 bent glass street signs for No. 190 lantern.
- 736 glass street numbers.
- 100 lantern shade holders.
- 300 number holders.
- 1 typewriter and desk at office.
- 1 oak roll-top desk at shop.
- 4 oak chairs at shop.
- 1 table at shop.
- 1 umbrella stand at shop.
- 1 umbrella rack at shop.
- 1 ice water cooler at shop.
- 11 settees at shop.
- 1 stove at shop.
- 2 coal hods at shop.
- 1 clock at shop.
- 11,434 iron lamp-posts on street.
- 995 iron brackets on street.
- 10 iron lamp-posts in gas companies' yards.
- 25 iron brackets in yard.
- 2 bridge lamp-posts.
- Street plans, maps and atlases.

Expenditures for Year 1908-1909.

Electric Lighting:

Edison Electric Illuminating Com-		
pany.	\$375,565	46
Boston Consolidated Gas Com-		
pany.	41,550	15
Charlestown Gas & Electric Com-		
pany.	32,755	81
New York, New Haven & Hart-		
ford Railroad Company.	32	52
		\$449,903 94 .

Gas Lighting:

Boston Consolidated Gas Com-		
pany.	\$98,036	34
Charlestown Gas & Electric Com-		
pany.	5,602	97
East Boston Gas Company .	5,988	81
Total for gas .	\$109,628	12
Rising Sun Street Lighting Com-		
pany:		
Rentals, repairs and labor .	120,260	75
Lamplighters:		
Seven and one-half months .	70,248	36
		300,137 23

Naphtha Lighting:

Naphtha .	\$12,036	87
Rising Sun Street Lighting Com-		
pany:		
Rentals, repairs, labor and		
naphtha .	18,674	28
Lamplighters:		
Seven and one-half months .	9,501	02
		40,212 17

Salaries and Wages:

Superintendent and clerks .	\$4,769	19
Inspectors .	4,316	71
Foreman, messenger, watchman		
and stenographer .	2,370	25
		11,456 15

Construction:

Underground work .	\$3,451	62
Wrought-iron work .	37	00
Electric changes .	71	22
Lamp-posts .	1,710	50
Painting lamp-posts .	14	67
		5,285 01

Carried forward \$806,994 50

<i>Brought forward</i>	\$806,994 50
Horse keeping, shoeing and repairs	607 58
Glass signs and numbers	465 73
Printing, stationery and periodicals	501 19
Traveling expenses and car fares	201 50
Telephones	149 56
Advertising	386 16
Messenger service	66 48

Shop Expenses:

Fuel, water, cleaning and repairs	137 36
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Total	<u>\$809,510 06</u>
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Revenue.

Rent of shop	\$775 00
Rebate on car tickets	23 75
Sale of torches	6 00

Total	<u>\$804 75</u>
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CONTRACT FOR LIGHTING WITH GAS AND NAPHTHA INCANDESCENT MANTLE LAMPS CERTAIN STREETS, PARKS AND ALLEYS IN THE CITY OF BOSTON.

The City of Boston having herewith entered into a contract for lighting with gas and naphtha incandescent mantle lamps certain streets, parks and alleys in said city upon the conditions set forth in the annexed specifications, the undersigned Rising Sun Street Lighting Company declares that the only persons interested in this contract as principals are named herein; that no official of the city, and no person acting for or employed by the city, is directly or indirectly interested therein or in any contract which may be made thereunder, or in any expected profits to arise therefrom; that he has carefully examined the annexed specifications; and he hereby bids in accordance therewith and agrees to do all the work set forth in said specifications at the following prices, excluding the furnishing of gas:

Schedule of Prices.

KIND OF LAMP.	Price per Annum.
Single gas incandescent burners.....	\$15 60
Single gasolene or naphtha incandescent burners.....	29 20
A lantern with two gas incandescent burners.....	17 60
A lantern with three gas incandescent burners.....	20 40
A cluster of two lanterns with one gas incandescent burner each.....	28 80
A cluster of two lanterns with two gas incandescent burners each.....	33 20
A cluster of three lanterns with one gas incandescent burner each.....	40 20
A cluster of three lanterns with two gas incandescent burners each.....	49 20

The full names and residences of all the persons interested in this contract as principals are as follows:

Rising Sun Street Lighting Company, Boston, Mass.
Peter J. Fitzgerald, *President and General Manager*.
Robert J. Gove, *Treasurer*.

NOTICE.— Give first and last names in full, and in case of corporations give the names of president, treasurer and manager or local agent, if any.

The corporation is of the State of Maine.

The name and address of the surety company who will sign the bond are:

Massachusetts Bonding and Insurance Company, Boston, Mass.

Signed this twentieth day of August, 1908.

Signature of contractor:

RISING SUN STREET LIGHTING COMPANY,
By PETER J. FITZGERALD, *President*.

Accepted. CITY OF BOSTON,
By GUY C. EMERSON, *Superintendent of Streets*.

Form of contract and bond approved:

THOMAS M. BABSON, *Corporation Counsel*.

Approved:

GEORGE A. HIBBARD, *Mayor*.

BOND.

The undersigned surety company binds itself, its successors and assigns to pay to the City of Boston the sum of twenty-five thousand (25,000) dollars.

This obligation is upon the condition that if the party to the contract hereto annexed, therein called the contractor, shall faithfully perform the said contract in accordance with the terms thereof, and do everything of him therein required, and shall fully protect the city against any infringements of patents, or any other suits in connection with or growing out of the performance of said contract, then this obligation shall become of no effect. Otherwise, it shall continue in full force.

Signed, sealed and delivered August 20, 1908.

MASSACHUSETTS BONDING AND INSURANCE COMPANY.

T. J. FALVEY, *President*.

WILLIAM M. DOWLING, *Assistant Secretary*.

The Corporation is of the State of Massachusetts.

The president is T. J. Falvey.

The treasurer is John T. Burnett.

The place of business in Boston is 77-78 State street.

SPECIFICATIONS.

1. By the city is meant the City of Boston, acting through the Superintendent of Streets or such subordinate or other officer as may have charge of street lighting in said city. By the contractor is meant the Rising Sun Street Lighting Company.

2. *Work to be Done.*—The work to be done under this contract shall consist of supplying all the material, labor and equipment necessary and required (except the posts and service pipes) to light with gas, gasolene or naphtha incandescent lamps such streets, parks, alleys and public places as may from time to time be designated by the city during the continuance of this contract, for a period of one year from September 15, 1908. He must also light, extinguish and keep clean such open-flame fire-alarm signal lamps as the city may from time to time establish.

3. *Plant to be Furnished by Contractor.*—The contractor must furnish his own plant to do the work, and is required to furnish and erect and put in service, at his own cost, to the satisfaction of the city, all lanterns, burners and other appurtenances, contrivances and fixtures which are necessary to operate and maintain the said lamps, and thereupon the contractor shall forthwith proceed to do the lighting. The necessary equipment shall be placed upon such gas posts as may be furnished and from time to time indicated by the city. The said plant and all appurtenances so furnished by the contractor shall remain his property and must be removed by him at the expiration of the contract at his own expense.

If in the opinion of the city the contractor does not exercise due diligence in the erection of said plant, or if the materials furnished therefor are not to the satisfaction of the city, the city may give the contractor notice in writing of such dereliction, and then if the contractor fails within thirty days thereafter to obey any proper order of the city in connection with the work of erecting and furnishing the plant, the said superintendent, with the consent in writing of the Mayor, may declare the contract forfeited.

4. *Lamp-posts.*—The posts on which the contractor is to place and operate his lanterns will, together with the service

pipes, be furnished by the city free of expense to the contractor. They shall be neatly painted by the contractor such color as the city may designate, and shall be repainted from time to time whenever, in the opinion of the city, it shall be deemed necessary. The posts must be kept free from dirt and must not be used for advertising purposes. The city will set, connect and keep the posts in good repair and plumb.

The contractor must furnish cross-arms on such posts as the city may designate, arranged to take two or three lanterns as may be required by the city.

5. *Lanterns.*— The lanterns must be of boulevard pattern, and identical in construction with the sample lantern submitted with the bid. The lamps and ventilators must be so constructed that the lights therein will be protected against insects and wind and weather.

6. *Burners and Mantles.*— The burners to be used must be first-class in material and workmanship, furnishing at all times when in service a steady, clear, white light, free from smoke, of the required candle power.

If the burners shall not give continuously the required candle power they must be replaced by the contractor with burners that will. No incandescent mantle will be permitted to be used unless composed of the best material and standard weave and of first-class quality in all respects.

No incandescent mantle shall be used by the contractor which will shrink beyond reasonable dimensions from the standard required; and all broken, smoked or blackened, ragged or frayed mantles must be at once replaced with new mantles by the contractor.

7. *Time of Lighting.*— The lamps must be lighted and extinguished in accordance with a schedule to be furnished by the city, said schedule not to exceed four thousand burning hours per lamp per year. The lamps must be lighted within one hour from the time fixed in the schedule as the time for beginning, and must be extinguished within one hour from the time fixed in the schedule as the time for beginning to extinguish.

In order that the city may determine whether the gas or naphtha lamps are lighted and extinguished in accordance with the official schedule or time table hereinbefore mentioned, the contractor shall furnish the said official with maps or lists showing the number and geographical location of each lamp in the district of each lamplighter, and designating the particular lamp at which each lamplighter commences to light and also the lamp at which he completes the lighting; and in extinguishing the lamps the lamplighter shall begin

and finish at the same lamps as are designated for beginning and finishing points on any lamp district during the term of contract.

The lamplighters or other employees of the contractor will not be permitted to climb the lamp-posts for the purpose of lighting the lamps, or for any other purpose, except by use of a ladder.

For every light that does not burn continuously at the proper candle power throughout the hours prescribed each night, a sum equal to $\frac{2}{365}$ of the contract price per lamp per year, for each night's failure, will be deducted from the amounts due the contractor and forfeited to the city. These "outs" will be reported by the Police Department at its respective police stations daily, in writing, open to the contractor, and shall be regarded as final and binding upon the contractor, errors proven or admitted excepted.

8. *Repairs and Maintenance.*—The contractor must at his own expense keep the entire plant in good repair and maintain same to the satisfaction of the city. Upon failure of the contractor to promptly make any and all necessary repairs (including repainting of lanterns and posts) the city may cause same to be done and deduct the cost thereof from any amounts that may become due to the contractor. All glass must be cleaned at least once a week, and oftener if necessary to do so, in order not to retard or diminish the candle power of the lamps. All broken or displaced glass, and all broken or defective mantles, must be replaced forthwith, and all street lamps must be constructed so that present signs may be attached, and shall, after each cleaning, be replaced, with the signs facing the proper street. All broken or displaced glass shall be removed forthwith by the contractor.

The contractor shall report, in writing, at the office of the official in charge of street lighting, on Thursday of each week, the number of each kind of lamps lighted on each of the preceding seven nights, and on the tenth day of each month the number of each kind lighted, as aforesaid, on each night subsequent to the last report, stating in each report the name of each person lighting the lamps, and the locations of any and all lamps added to or removed from the district of each lamplighter, and is to notify said official, in writing, of any damage to or repair needed to the posts or service pipes.

The contractor will be allowed the entire use of the Lamp Department shop, No. 690 Albany street, at a rent of \$100 per month.

9. *Removal of Lamps.*—Whenever ordered to do so by the city, the contractor must change the location of lamps,

weather permitting, from one place to another (posts to be furnished by the city ready to receive lamp), at his own cost and expense.

10. *New Lamps.*— The city may, from time to time, order the erection and maintenance of new or additional lamps, at such locations as it may deem proper, and it shall be the duty of the contractor, at his own cost and expense, to properly erect upon said posts furnished, placed and connected by the city, and put into operation such additional lamps and maintain the same in all respects as called for in these specifications. All additional lamps ordered shall be put in service within ten days after they are ordered and posts set and connected; and notice that the same are in service shall be given by the contractor to the city.

11. *Discontinuance of Lamps.*— The city shall have the right to increase or diminish the number of lamps furnished under the contract, but it is understood that the total number of gas and naphtha lamps to be furnished under this contract shall not at any time be less than 7,500.

Naphtha or gasolene lamps may be changed to gas lamps at the discretion of the city when the gas post and service connections are ready therefor. When orders to discontinue lamps are given, in accordance with the above, the contractor must put them out of service within five days, and notify the City of Boston in writing; payment for the same shall cease on such discontinuance, and when the contractor removes a gas lantern without substituting another therefor, he shall properly plug the service pipe so that the gas will not escape therefrom.

12. *Candle Power.*— All the burners, whether of gas, gasolene or naphtha, must be maintained continuously when in service at not less than 60 actual candle power. The city shall have the right at any time to test the lights in the usual accepted manner by standard photometric tests, and if there is found any deficiency the contractor must proceed at once to remedy the defects and raise the burners to the required candle power.

13. *Supply of Gas.*— The city shall furnish all the gas required for the lamps, but is not to light it.

The city agrees to furnish at the mouth of the riser pipes in the gas posts the required amount of gas for street lighting, of the quality and at the pressure furnished in said city for residence consumption; and the contractor will be required to produce at all times a sixty (60) candle power light on a consumption of not to exceed 3 feet of gas per lamp per hour. Any excess consumption over and above an average of

3 feet per lamp per hour shall be paid for by the contractor at the rate of eighty (80) cents per thousand cubic feet, which excess shall be determined as hereinafter provided. After the determination, said amount shall become due and payable by the contractor, or on failure of payment may be deducted by the city from any amounts due or thereafter to become due the contractor.

Tests to ascertain such consumption shall be made when requested by either party in the following manner: representatives of the parties hereto shall select at random from various parts of the city not less than thirty (30) and not more than fifty (50) burners, noting the pressure at the particular post from which each burner is taken. Such burners shall then be tested by the representatives of the parties hereto for the consumption under the same conditions of pressure as that obtained at the particular places where the burners were in use.

If by such tests it shall appear that the said burners are consuming gas at a rate greater than 3 cubic feet per hour on an average, then it shall be assumed that all burners in the city are consuming gas at the same rate as such average rate, and the amount of excess gas consumed shall be arrived at by multiplying the number of lighting hours by the excess amount over the rate as shown by the test. The rate of consumption so determined shall govern until another test is made.

14. *Naphtha or Gasolene.*— The contractor shall furnish all the gasolene or naphtha which may be necessary to supply incandescent mantle gasolene or naphtha street lamps at such locations as the city may from time to time direct, and furnish with posts for the purpose.

The contractor will be required to supply each lamp each night with a sufficient quantity of gasolene or naphtha to insure the standard of light herein contracted for at all times during the hours of burning.

The gasolene or naphtha used in supplying the lamps must be of the very best grade, free from water, gum, glue or other impurities.

15. *Payments.*— Payment for the work performed under this contract shall be made by the city monthly, in the same manner as other city work is paid for, at the rates specified in the contract and subject to appropriations.

16. *Miscellaneous.*— The contractor shall allow his employees to lodge, board and trade wheresoever and with whomsoever they may choose, and shall give preference in employment, first, to citizens of the City of Boston, second, to citizens of Massachusetts, and shall save the city and its

agents and employees harmless from any and all claims against them or any of them arising from any act, omission or neglect of the contractor, his agents or employees in carrying on the contract, and no workman, laborer or mechanic employed on this work within the Commonwealth shall be requested or required to labor more than eight hours in any one calendar day.

Any assignment, subletting or otherwise permitting the work herein specified to be done by any one other than the contractor, or encumbering the work or plant by mortgage or in any way, will be sufficient cause for the abrogation of the contract by the city.

APPENDIX D.

REPORT OF THE DEPUTY SUPERINTENDENT OF
PAVING DIVISION.

BOSTON, MASS., February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

DEAR SIR,— The annual report of the expenditures and income of the Paving Division of the Street Department for the financial year ending January 31, 1909, is herewith submitted, showing the nature of the work, the number and variety of permits issued and the details of the expenditures involved in paving, macadamizing, regulating and constructing various streets.

The Paving Division has charge of the following work:

The maintenance and rebuilding of street surfaces and sidewalks.

The placing of street signs.

The numbering of buildings.

The issuing of permits to open or occupy the streets, or for such other purpose as may be required under the ordinances.

The removal of snow and ice from the streets, gutters and plankwalks.

The cleaning of streets in the outlying sections of the city not covered by the Street Cleaning Division.

The division is in charge of a deputy superintendent, with a clerical force under the direction of a chief clerk and an engineering force under the direction of a chief engineer.

The important work was the construction of several of the streets in the downtown section and South Boston, as follows:

Granite block paving on a concrete base, with pitch and pebble joints:

Scollay square.

Bromfield street.

Kneeland street.

Eliot street, Tremont to Pleasant street.

A street, Congress street to Mt. Washington avenue.

Wooden blocks on concrete base:

Church street, Boylston to Providence street.

Providence street, Church street to Park square.

West street.

Summer street, Washington to Hawley street.

Washington street, Court avenue to Cornhill.

State street, north and south of old State House.

On the first four streets the contracts were awarded in 1907, the specifications calling for a 3-inch by 3½-inch gum block. The 1908 contracts, the last two, called for a 4-inch by 4-inch hard pine block.

The asphalt pavement laid this year was confined to the resurfacing of several small areas of old asphalt streets, with the exception of Cooper street, which was awarded last year. The asphalt patching was advertised and awarded to the lowest bidder, the Warren Brothers Company being the successful contractors.

CRUSHED STONE.

In previous years the crushed stone used by the division was produced wholly by the city crushers at a cost considerably in excess of what it could be bought for in the open market. This condition having been shown clearly, it was decided to dispense with the city crushing plants located on leased ledges, and five (5) were sold to the highest bidders. There are now three (3) plants which are located on city property and still used by the city, one at Codman street, Dorchester, one at Chestnut Hill avenue, Brighton and one at Dimock street, Roxbury.

STEAM ROLLERS.

Eleven 15-ton and one 3-ton steam rollers constitute the steam roller outfit of the division. These rollers were overhauled during the winter, the necessary repairs made, painted, etc., and turned out for the season's work in good condition. As these rollers do a great deal of picking in the repair of the macadam, the constant shake and jar loosen the bolts and wear the bearings unevenly, so that after a season's use there is quite an amount of work to be done to put them in proper repair.

PERSONAL PROPERTY.

The personal property of the division, consisting of tools, hardware, appliances, etc., is in fair condition, the report at the end of the year showing a valuation in the neighborhood of \$63,000.

YARD AND WHARF ROOM.

Each district is well provided for in the matter of yard room, the North Yard particularly having an excess in two locations, one at Hecht's wharf and one at Burnham's wharf, which are very expensive and could be dispensed with without detriment to the division. The property occupied by the division for yards, stables, etc., is owned by the city, with the exception of the East Boston and South Boston districts, which are leased.

GENERAL WORK.

The division force has been employed on the general work of maintenance, such as paving, macadam reconstruction, edgestone and sidewalk construction, new and old, and fence and bulkhead repairs, as follows:

Macadam resurfacing	419,824 square yards.
Edgestone set (new)	12,818 linear feet.
Edgeston reset	11,216 linear feet.
Granite block paving, gravel base and joints	32,656 square yards.
Granite block paving, gravel base and joints (new)	943 square yards.
Brickwalks (new)	3,319 square yards.
Brickwalks relaid	6,736 square yards.
Crushed stonewalks	1,534 square yards.
Excavation	2,148 square yards.

These quantities do not include a great number of small areas patched in the macadam surface and pavement on which exact measurements cannot very readily be obtained, as well as pieces of edgestone reset in different places in connection with gutter paving, etc.

Under the provisions of chapter 323 of the Acts of 1891, and the acts in amendment thereof and addition thereto, twenty-five new streets were constructed.

Respectfully submitted,

JAMES H. SULLIVAN,
Deputy Superintendent.

	Old (reset).	New (first setting).
Edgestones set.....	17,489 linear feet.	23,573 linear feet.
Concrete base laid.....	10,220 square yards.	1,043 square yards.
Granite block paving laid, on a concrete base, with pitch and pebble joints...	1,984 "	11,744 "
Granite flagging laid, on a concrete base, with pitch and pebble joints.....	97 "	491 "
Granite block paving laid, on a gravel base, with gravel joints.....	14,080 "	7,204 "
Granite flagging laid, on a gravel base, with gravel joints.....	292 "	570 "
Wood block pavement laid.....		4,549 "
Asphalt surface laid.....	4,441 square yards.	
Asphalt patching.....	9,050 "	
Brick sidewalks laid.....	6,647 "	4,466 "
Artificial stone sidewalks laid.....	1,489 "	21,585 "
Crushed stone sidewalks laid.....	404 "	7,383 "
Loam furnished and laid.....		4,323 "
Telford base laid.....		41 "
Macadam surface placed.....	4,320 square yards.	30,543 "
Vitrified brick paving laid on a concrete base (crosswalks).....		287 "
Vitrified brick paving laid on a gravel base (gutters).....		3,591 "
Artificial stone curbing laid.....	100 linear feet.	8 linear feet.
Coal-tar concrete sidewalk laid.....	2,431 square yards.	
Granitoid blocked pavement laid.....		946 square yards.
"Tarvia" furnished and applied.....		41,538 "
Rubble wall built.....		325 cubic yards.
Portland cement retaining wall built...		108 linear feet.

Total of the Amount of Work Done by the Street Department Forces.

	Old, Linear Feet.	New, Linear Feet.	Old, Square Yards.	New, Square Yards.	Square Yards.	Cubic Yards.
Macadam.....					419,824	
Edgestone.....	11,216	12,818				
Granite block paving on a gravel base, with gravel joints.....			32,656	943		
Brick sidewalks.....			6,736	3,319		
Crushed stone sidewalks....					1,534	
Excavation.....						2,148

The following is a description of the most important work done during the year, under the supervision of the Chief Engineer.

PAVING.

A street, from Congress street to 175 feet south of Binford street, about 1,610 feet in length, was repaved with large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints, by the F. S. & A. D. Gore Corporation, under contract, who also did the excavating and regulating. The old paving blocks were hauled away by the contractor; some to Lexington street, East Boston; some to the Massachu-

setts avenue lot; some to City square Charlestown; and some were sold to the contractor. The bricks, flagging and edgestone were furnished by the city on the line of the work. The crushed stone for the concrete was furnished by the city at the Columbia road crusher and was hauled by the contractor. The new paving blocks and the cement for the concrete were furnished by the contractor. The former surface was granite blocks on a gravel base, with gravel joints, and was in a very bad condition.

Bromfield street, from Tremont street to Washington street, about 515 feet in length, was repaved with large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints. The work was done under contract by John I. Fitzgerald, who also did the excavating and regulating. The crushed stone for the concrete was furnished by the city and hauled by the contractor. The paving bricks were furnished by the city on the line of the work. The new paving blocks, flagging and other materials, necessary for the paving and concrete base, were furnished by the contractor. The old paving blocks and flagging were hauled to the North End Yard and to the Revere Street Yard, by the contractor. The former surface was granite blocks on a gravel base.

Chelsea street, from forty (40) feet south of Scott's court to Chelsea bridge south, about 393 feet in length, was repaved, with the exception of the track location, with the existing granite blocks on a gravel base, with gravel joints, by Cornelius J. Duggan, under contract, who also did the excavating and regulating. This work was necessitated by a general settlement of the street.

Eliot street, from Tremont street to Pleasant street, about 707 feet in length, was repaved with new large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints. The work was done, under contract, by John I. Fitzgerald, who also did the excavating and regulating. The existing concrete base was cleaned off and brought to the proper grade for the new pavement with Portland cement concrete. The old paving blocks were hauled to the Albany Street Yard by the contractor. The crushed stone for the concrete base was furnished at the Columbia road crusher and hauled by the contractor. The new paving blocks and the cement for the concrete base were furnished by the contractor. The edgestone and flagging were furnished by the city at the South End Paving Yard and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The former pavement was granite block on a concrete base, from the rail to the edgestone, with pitch joints. The track location was formerly paved on a gravel base, with gravel joints and was repaved on a concrete base by the Boston Elevated Railway Company.

Kneeland street, from Washington street across Harrison avenue, about 416 feet in length, was repaved with new large granite blocks, on a six (6) inch Portland cement concrete base,

with pitch and pebble joints. The work was done, under contract, by John Donley Company, who also did the excavating and regulating. The old paving blocks were removed and hauled to Lawn street, Roxbury, and to the Massachusetts avenue lot, by the contractor. The new paving blocks and the cement for the concrete base were furnished by the contractor. The edgestone and flagging were furnished by the city at the South Yard and were hauled by the contractor. The crushed stone for the concrete base was furnished by the city at the Columbia road crusher and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The track area was paved by the Boston Elevated Railway Company. The former pavement was granite blocks on a gravel base with gravel joints.

Court street, from Cornhill to Sudbury street, about 530 feet in length, and Hanover street, from Scollay square northeasterly, about 65 feet in length, were repaved with new large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints. The work was done, under contract, by John I. Fitzgerald, who also did the excavating and regulating. The old paving blocks and flagging were hauled to the South Yard and to the Massachusetts avenue lot by the contractor. The crushed stone for the concrete base was furnished by the city at the Columbia road crusher and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The new paving blocks and new flagging were furnished by the contractor. The track area was paved by the Boston Elevated Railway Company. The former pavement was granite blocks on a gravel base.

Summer street, from the bridge over A street to the bridge over the N. Y., N. H. & H. Railroad, about 372 feet in length, was repaved with the existing granite blocks on a gravel base with gravel joints. The work was done, under contract, by James P. Collins, who also did the necessary regulating. This work was necessitated by a settlement of the roadway, which was repaved from the tracks of the elevated company to the edgestone, nothing being done between the tracks. The plank sidewalk was relaid by the Street Department force.

ASPHALT.

Beacon street, from Brimmer street, across Arlington street, about 364 feet in length, was resurfaced by Jones & Meehan, under a ten (10) year maintenance guarantee, with two (2) inches of American rock asphalt wearing surface and one (1) inch of asphaltic cement binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete or asphaltic cement binder. The contractor also did the regulating required.

Cooper street, from Washington Street North, across Endicott street, about 243 feet in length, was resurfaced by the Barber Asphalt Paving Company, under a ten (10) year maintenance guarantee, with one and one-half ($1\frac{1}{2}$) inches of Trinidad asphalt wearing surface and one and one-half ($1\frac{1}{2}$) inches of bituminous concrete binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete. The old base had been badly cut up on account of the many trenches dug in the street and it required considerable new concrete to bring it to the proper grade. The regulating of the edgestone, brick sidewalks and flagging was done by the contractor. The sidewalk bricks were furnished by the city on the line of the work.

Corning street, from Washington street to Shawmut avenue, about 338 feet in length, was resurfaced by the Warren Brothers Company, under a ten (10) year maintenance guarantee, with one and one-half ($1\frac{1}{2}$) inches of Acme asphalt wearing surface and one and one-half ($1\frac{1}{2}$) inches of bituminous concrete binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete base. The contractor also did the excavating and regulating. The sidewalk bricks were furnished by the city on the line of the work. The former surface was Trinidad asphalt on a six (6) inch concrete base.

Kilby street, between Central street and Milk street, about 375 feet in length, was resurfaced by Jones & Meehan, under a ten (10) year maintenance guarantee, with two (2) inches of American rock asphalt wearing surface and one (1) inch of asphaltic cement binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete or asphaltic cement binder. The contractor also did the regulating required. The former surface was Trinidad asphalt on a six (6) inch concrete base.

WOOD BLOCK PAVING.

Church street, from Boylston street to Providence street, about 160 feet in length, was paved with wood blocks on a six (6) inch Portland cement concrete base, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. The regulating of the edgestones and sidewalks was done by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The old paving blocks were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a gravel base with gravel joints.

Providence street, from the west side of Church street 170 feet easterly, was paved with wood blocks on a six (6) inch Portland cement concrete base, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. The regulating of the edgestones and sidewalks was done by the contractor. In the rear of Hotel Thorndike the brick sidewalk was replaced with flagging laid in cement mortar. The old paving blocks were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a gravel base with gravel joints.

Summer street, between Washington street and Hawley street, about 240 feet in length, was paved with wood blocks on the existing concrete base, which was cleaned off and brought up to the proper grade with Portland cement concrete, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. The contractor also laid a vitrified brick crosswalk at Washington street and the bricks for the same were furnished by the city on the line of the work. The old paving blocks were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a concrete base with grout joints. The sum of six hundred and fifteen dollars (\$615) has been charged to the Transit Commission as its proportionate share of the expense of repaving this street.

Washington street, from Cornhill to about 78 feet south of Court avenue, about 513 feet in length, and State street, on the north side of the Old State House, about 117 feet in length, and State street, on the south side of the Old State House, about 123 feet in length, were paved with wood blocks, on a six (6) inch Portland cement concrete base, with cement grout bed and joints, by James Doherty, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. This work is a continuation of the work done last year on Washington street, thus completing the laying of the wood block from Beach street to Cornhill, all of which work was necessitated on account of the work done in connection with the building of the Washington Street Tunnel. The regulating was done at the expense and under the supervision of the Transit Commission. The old paving blocks and flagging were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a concrete base with pitch and pebble joints, but on account of the tunnel operations this pavement was taken up and the roadway was temporarily repaved with granite blocks on a gravel bed. The sum of four thousand eight hundred sixty-seven and eighty one-hundredths

dollars (\$4,867.80) has been charged to the Transit Commission as its proportionate share of the expense of repaving these streets.

West street, from Washington street to Tremont street, about 470 feet in length, was paved with wood blocks on the existing concrete base, which was cleaned off and brought up to the proper grade with Portland cement concrete, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The old paving blocks were hauled by the contractor, some to Lexington street, East Boston; some to the East Boston Paving Yard, and the balance to the Massachusetts avenue lot. A vitrified brick crosswalk was laid by the contractor at Washington street, the bricks for the same being furnished by the city on the line of the work. The former pavement was granite blocks on a concrete base with grout joints.

GRANITOID CONCRETE BLOCKED PAVEMENT.

This is a patent pavement composed of crushed stone and Portland cement. It is laid seven (7) inches deep and consists of five and one-quarter ($5\frac{1}{4}$) inches of concrete and one and three-quarters ($1\frac{3}{4}$) inches of surface blocking. The concrete is composed of one (1) part Portland cement, three (3) parts sand and four (4) parts of crushed stone. After the concrete has been placed, and before it has begun to set, there is deposited thereon the Granitoid blocking, which is composed of two (2) parts of Portland cement and three (3) parts of fine hard crushed stone. After the initial set this is worked into brick shapes of approximately four and one-half ($4\frac{1}{2}$) inches by nine (9) inches, having rectangular surface similar to paving blocks. An expansion joint of composition is made across the street at such intervals as may be necessary. This pavement was laid by the Rudolph S. Blome Company, under a five (5) year maintenance guarantee, in *Zeigler street*, between Washington street and Warren street, about 315 feet in length. The contractor did the excavating and furnished the materials for the pavement. The surplus material was hauled by the contractor to the Dimock street lot. The regulating was done by the city. The former surface of the street was macadam.

ASSESSMENT STREETS.

The following streets have been constructed or are in the process of construction under the provisions of chapter "323" of the Acts of 1891, and the acts in amendment thereof or in addition thereto. *Ashland street*, from Mill street to Everdean street, is about 289 feet in length. The contract for constructing the surface of this street was awarded to Philip Doherty November 19, 1907. Work was begun June 1, 1908, and

completed June 18, 1908. It is a thirty-eight (38) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. The existing macadam roadway and crushed stone sidewalks were found to be in good condition and required only reshaping to conform with the present construction. The straight edgestones and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone and screenings for reshaping were furnished by the contractor.

Avenue Louis Pasteur, between the Fenway and Longwood avenue, about 1,371 feet in length, is being filled in and graded. The filling is obtained from various sources. William J. Barry, under his contract dated October 2, 1908, is at present delivering filling. A large part of the fill is over low, marshy ground, and on account of the consequent settlement the work proceeds rather slowly.

Bayswater street, from Saratoga street, across Austin avenue, is about 1,120 feet in length. The contract for constructing the surface of this street was awarded to James Doherty October 8, 1907. Work was begun October 15, 1907, and suspended December 6, 1907. It was resumed March 26, 1908, and completed April 2, 1908. It is a fifty (50) foot street with a 6-inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestones and eight (8) foot crushed stone sidewalks. The work this season consisted principally of completing the macadam roadway and crushed stone sidewalks, the crushed stone for the same being furnished by the contractor.

Bellevue street, from Hamilton street to Kane street, is about 493 feet in length. The contract for constructing the surface of this street was awarded to John McCourt November 23, 1907. Work was begun April 18, 1908, and completed July 16, 1908. The greater part of this street is thirty-five (35) feet in width, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and six (6) foot crushed stone sidewalks. A small part of the street is forty (40) feet in width, with seven (7) foot sidewalks, and is of the same construction as above. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone and screenings were furnished by the contractor.

Bernard street, from Talbot avenue to the New England Railroad, is about 946 feet in length. The contract for constructing the surface of this street was awarded to William J. Barry June 23, 1908. Work was begun June 30, 1908, and completed September 9, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick crosswalks on a concrete base with grout joints,

granite edgestones and seven (7) foot crushed stone sidewalks. The edgestone, bricks for crosswalks and gutters, sand, cement and crushed stone for the concrete base for crosswalks, paving blocks for brows of crosswalks and the crushed stone for the roadway and sidewalks were furnished by the contractor.

Bruce street, from Dracut street to Wrentham street, is about 135 feet in length. The contract for constructing the surface of this street was awarded to Daniel E. Lynch November 11, 1907. Work was begun November 29, 1907, and suspended December 26, 1907. It was resumed July 23, 1908, and completed September 2, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestones and seven (7) foot crushed stone sidewalks. The work done this season consisted of completing the roadway and the crushed stone sidewalks, the crushed stone for the same being furnished by the city and hauled by the contractor.

Corona street, from Bowdoin street to Geneva avenue, is about 1,001 feet in length. The contract for constructing the surface of this street was awarded to William J. Barry June 23, 1908. Work was begun August 7, 1908, and completed October 14, 1908. It is a thirty-five (35) foot street with a six (6) inch macadam roadway, three (3) foot brick gutters, brick and flagging crosswalks and six (6) foot artificial stone sidewalks. The new edgestone, brick blocks and crushed stone were furnished by the contractor. Such of the existing material on the street as was found suitable was used in the present construction. The contract for constructing the artificial stone sidewalks was awarded to Jeremiah J. Sullivan September 3, 1908. Work was begun October 28, 1908, and suspended December 19, 1908. The sidewalk on the south side was completed for nearly the entire length of the street. The remaining sidewalks were excavated and filled with cinders and left in a passable condition for the winter. Work will be resumed early in the spring.

Cottage street, from Maverick street across Gove street, is about 630 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 14, 1907. Work was begun April 23, 1908, and suspended May 28, 1908. It was resumed July 28, 1908, and completed July 31, 1908. It is a fifty (50) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and granite edgestone. The sidewalks, which are eight (8) feet in width, are of brick except along the playground, where they are of crushed stone. The edgestone, paving blocks and sidewalk bricks were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. The crushed stone for the macadam and sidewalks was furnished by the contractor.

Cotton street, from Walter street to Fairview street, is about 721 feet in length. The contract for constructing the surface

of this street, with the exception of the artificial stone sidewalks, was awarded to Peter F. Connolly July 3, 1908. Work was begun July 16, 1908, and suspended August 24, 1908. It was resumed October 2, 1908, and completed October 22, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick and flagging crosswalks and granite edgestone. The sidewalks, seven (7) feet in width, have an artificial stone walk four and one-half ($4\frac{1}{2}$) feet wide and a seeded loam space 1 foot 11 inches wide. The edgestone, bricks for crosswalks and gutters, sand, cement and crushed stone for concrete base for brick crosswalks, paving blocks for brows to crosswalks and the crushed stone for the roadway were furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Thomas A. Nolan July 23, 1908. Work was begun August 18, 1908, and completed September 15, 1908. These walks are laid under a ten (10) year maintenance guarantee. Underdrains were laid connecting the cinder foundation of the walks with the catch-basins, the object being to prevent the accumulation of water at the low end of the walks and a consequent upheaval which might be occasioned by the action of frost in the ground.

Dakota street, from Greenbrier street to Geneva avenue, is about 1,453 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to William J. Barry June 23, 1908. Work was begun July 20, 1908, and completed October 15, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick and flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The new edgestone, brick blocks and the crushed stone were furnished by the contractor. Such of the existing material on the street as was found suitable was used in the present construction. The contract for constructing the artificial stone sidewalks was awarded to Jeremiah J. Sullivan September 16, 1908. Work was begun October 12, 1908, and completed November 28, 1908. These sidewalks are laid under a ten (10) year maintenance guarantee.

Everdean street, from Ashland street to Green Hill street, is about 397 feet in length. The contract for constructing the surface of this street was awarded to John W. Collins November 29, 1907. Work was begun May 11, 1908, and completed June 20, 1908. It is a forty (40) foot street with a macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and eight (8) foot crushed stone sidewalks. The existing macadam roadway and crushed stone sidewalks were found to be in good condition and were allowed to remain. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and the paving blocks were furnished by the city on the line of the work.

Everdean street, from Green Hill street to Preston street, is about 411 feet in length. The contract for constructing the surface of this street was awarded to Philip Doherty November 19, 1907. Work was begun March 31, 1908, and completed June 20, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and granite edgestone. The sidewalks are nine (9) feet wide on the east side of the street and nine and one-half ($9\frac{1}{2}$) feet wide on the west side. This arrangement was made in order to preserve several large shade trees. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The paving blocks and circular edgestone were furnished by the city on the line of the work. The crushed stone was furnished by the contractor.

Evergreen street, from South Huntington avenue about 443 feet easterly, is about 456 feet in length. The contract for grading this street was awarded to Maik H. Lynch December 11, 1908. Work was begun December 16, 1908, and at the present time it is about two-thirds ($\frac{2}{3}$) done. The work consists of cutting through two (2) good sized hills, a large part of which are rock, and filling the low sections of the street, so that when the work is finished the street will have been graded to the proper sub-grade, ready for construction.

Frankfort street, from Maverick street across Gove street, is about 608 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 14, 1907. Work was begun April 3, 1908, and completed May 29, 1908. It is a fifty (50) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and granite edgestone. The sidewalks, eight (8) feet in width, are of brick except along the playground, where they are of crushed stone. The edgestone was furnished by the city, part of which was hauled by the contractor and part delivered on the line of the work by the city. The paving blocks and sidewalk bricks were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. The crushed stone for the roadway and sidewalks was furnished by the contractor.

Harlem street, from Glenway street to Greenwood street, is about 582 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks and curbs, was awarded to James Doherty June 22, 1908. Work was begun August 10, 1908, and completed September 19, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick crosswalks on a concrete base with grout joints. Granite edgestone was set at the Greenwood street end of this street. The existing artificial stone sidewalks and curb were allowed to remain. The edgestone, bricks for gutters and crosswalks, cement, sand and crushed stone for the concrete base for the

crosswalks, and the crushed stone for the roadway were furnished by the contractor.

Kilton street, from Harvard street to Park street, is about 842 feet in length. In connection with the work of constructing this street, about 105 feet of Athelwold street was rebuilt to conform to the new grade. The contract for constructing the surface of these streets was awarded to Philip Doherty October 8, 1907. Work was begun October 16, 1907, and suspended December 14, 1907. It was resumed May 2, 1908, and completed May 6, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. On a part of this street artificial stone sidewalks seven (7) feet in width had been built previous to construction. These were in good condition and were allowed to remain. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone, paving blocks and crushed stone were furnished by the city on the line of the work.

Larchmont street, from Waldeck street to Greenbrier street, is about 1,077 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to the D. E. Coleman Company November 1, 1907. Work was begun April 9, 1908, and suspended May 30, 1908. It was resumed July 14, 1908, and completed July 17, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and a half ($4\frac{1}{2}$) feet of which is artificial stone and the balance loam space. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and the paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Warren Brothers Company November 29, 1907. Work was begun June 9, 1908, and completed July 14, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Larkin street, from Adams street to Hampden street, is about 313 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty & Co. June 22, 1908. Work was begun June 30, 1908, and completed August 15, 1908. It is a twenty (20) foot street with a six (6) inch macadam roadway with three (3) foot brick block gutters and brick crosswalks. The sidewalks are three and one-half ($3\frac{1}{2}$) feet in width and are paved with brick. Such of the existing material on the street as was found in good condition was used in the present construction. The new edgestone, brick blocks, sidewalk bricks and crushed stone were furnished by the contractor.

Lincoln street, Brighton, at the corner of Cambridge street, was widened on the southerly corner and a large circle of edge-

stone was put in. The work done consisted in filling, setting the edgestone, extending the crosswalk, paving the gutter and resurfacing the roadway and sidewalks, all of which was done by the Street Department forces.

Mapleton street, from Market street to Murdock street, is about 1,714 feet in length. The contract for constructing the surface of this street was awarded to Coyle & Clark July 6, 1907. Work was begun August 16, 1907, and suspended January 10, 1908. It was resumed April 28, 1908, and completed June 27, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick crosswalks on a concrete base, granite edgestone and seven (7) foot crushed stone sidewalks. The edgestone, bricks for gutters and crosswalks and the crushed stone were furnished by the city and hauled by the contractor.

Mallet street, from Florida street to Adams street, is about 730 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to Timothy F. Bradley September 3, 1907. Work was begun September 17, 1907, and suspended November 15, 1907. It was resumed May 11, 1908, and completed May 19, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and one-half ($4\frac{1}{2}$) feet of which is artificial stone and the balance loam space. The straight edgestone, flagging and crushed stone were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The contract for constructing the artificial stone sidewalks was awarded to Simpson Brothers Corporation November 14, 1907. Work was begun November 21, 1907, and suspended December 3, 1907. It was resumed April 22, 1908, and finished October 24, 1908. These sidewalks are laid under a ten (10) year maintenance guarantee.

Norwood street, from Tolman street to about 444 feet northwesterly. The contract for constructing the surface of this street was awarded to Philip Doherty November 19, 1907. Work was begun December 4, 1907, and suspended December 12, 1907. It was resumed March 30, 1908, and finished May 19, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. A wooden fence was built across the northerly end of the street, the material for which being furnished by the contractor.

Norton street, from Bowdoin street to Speedwell street, is about 530 feet in length. The contract for constructing the

surface of this street, with the exception of the artificial stone sidewalks, was awarded to the D. E. Coleman Company November 1, 1907. Work was begun May 5, 1908, and completed July 20, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to the W. A. Murtfeldt Company July 15, 1908. Work was begun August 4, 1908, and completed August 31, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Parkview street, from Seaver street to Hutchings street, is about 403 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to R. L. Barrett November 11, 1907. Work was begun November 13, 1907, and suspended December 19, 1907. It was resumed April 13, 1908, and completed April 30, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and artificial stone sidewalks seven (7) feet in width. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Robert Eagar, Jr., May 26, 1908. Work was begun June 20, 1908, and completed July 7, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Samoset street, from Welles avenue to Centre street, is about 875 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to D. E. Coleman Company November 1, 1907. Work was begun November 13, 1907, and suspended December 14, 1907. It was resumed April 1, 1908, and completed April 13, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and one-half ($4\frac{1}{2}$) feet of which is artificial stone and the balance loam space. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Jeremiah J. Sullivan May 26, 1908. Work was begun June 2, 1908, and completed June 24, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Speedwell street, from Topliff street to Hamilton street, is about 735 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to William Barrett October 9, 1907. Work was begun October 15, 1907, and suspended December 14, 1907. Work was resumed May 11, 1908, and completed May 16, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and one-half ($4\frac{1}{2}$) feet of which is artificial stone and the balance loam space. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone, paving blocks and crushed stone were furnished by the city on the line of the work. The contract for constructing the artificial stone sidewalks was awarded to Warren Brothers Company October 31, 1907. Work was begun November 13, 1907, and suspended December 14, 1907. It was resumed May 5, 1908, and completed May 16, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

South Huntington avenue, from Huntington avenue, across Heath street, is about 1,148 feet in length. The contract for constructing the surface of this street was awarded to William J. Barry November 13, 1907. Work was begun March 16, 1908, and completed June 20, 1908. It is an eighty (80) foot street with a six (6) inch macadam roadway on each side of the car tracks, three (3) foot granite block gutters, flagging crosswalks, granite edgestone, and brick, crushed stone and artificial stone sidewalks thirteen (13) feet in width. This street was formerly a part of Heath street and was about fifty (50) feet wide. A widening was made on the westerly side. The circular edgestone, paving blocks and sidewalk bricks were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. The crushed stone for the roadway and sidewalks was furnished by the contractor. A contract for artificial stone sidewalks, to complete the existing artificial stone sidewalks on the easterly side, was awarded to the Simpson Brothers Corporation July 17, 1908. Work was begun July 28, 1908, and completed August 3, 1908. This work was necessitated by the widening of the sidewalks on the easterly side of the street, and the sidewalks were laid under a ten (10) year maintenance guarantee.

West Fourth street, South Boston, at the corner of Dorchester avenue, was widened on the northwest corner so as to enable the Boston Elevated Railway Company to lay tracks of a larger radii, in order that larger cars could be used. The work done was to put in a large radius curve of granite edgestone, cut back the street line, thus widening the sidewalk, repave the street corner and rebuild the catch-basin, all of which was done by the Street Department forces.

GENERAL.

Esmond street, from Blue Hill avenue to Bradshaw street, is about 920 feet in length. The contract for resetting the edgestone and relaying the granite block gutters was awarded to Daniel E. Lynch October 20, 1908. Work was begun October 26, 1908, and completed December 17, 1908. Under an extension of this contract the loam spaces were resodded.

Gainsborough street, from St. Stephens street to Hemenway street, is about 714 feet in length. The contract for relaying the artificial stone sidewalks, resetting the edgestones and relaying the granite block gutters, was awarded to Robert Eagar, Jr., June 29, 1908. Work was begun July 13, 1908, and completed August 10, 1908. The sidewalks were laid under a ten (10) year maintenance guarantee. This work was necessitated by the settlement of the street, the existing walks having settled so much that they were broken up and in a dangerous condition.

Kenney street ledge lot. In accordance with the terms of a lease entered into by the city and James W. Kenney, dated June 7, 1902, the city agreed to leave the premises at a level not lower than the land on the northerly side of the lot. On a part of the lot, rock had been quarried to a level somewhat lower. A contract to fill the lot to the required grade was awarded to Patrick F. Donovan February 14, 1908. Work was begun February 19, 1908, and completed August 29, 1908. There were 4,657 cubic yards of filling, furnished and placed by the contractor.

Lawn street, from Heath street to another part of Heath street, is about 1,454 feet in length. The contract for setting the edgestone and paving the gutters was awarded to the Trimount Contracting Company December 10, 1907. Work was begun August 26, 1908, and completed September 26, 1908. A small area of brick sidewalk was laid. The edgestone, gutter blocks and sidewalk bricks were delivered by the city on the line of the work.

Old Colony avenue (and parts of D and West Ninth streets), from Dorchester avenue to Dorchester street, is about 2,528 feet in length. The contract for constructing the surface of this street was awarded to the Fred S. & A. D. Gore Corporation October 1, 1908. Work was begun October 14, 1908. When completed it will be an eighty (80) foot street with a six (6) inch macadam roadway, four (4) foot granite block hip gutters, flagging crosswalks and gravel sidewalks, twelve (12) feet in width. With the exception of the widening on the westerly side, this was the former roadbed of the Old Colony Railroad. The work done this season consisted of rough grading, taking down old retaining walls and building dry rubble retaining walls on D street, West Ninth street and on Old Colony avenue near Dorchester street.

Summer street, north side, between Melcher street and A street, is about 276 feet in length. The contract for relaying

artificial stone sidewalk, resetting the edgestone and repaving the street, where necessary, was awarded to Warren Brothers Company November 16, 1908. Work was begun November 28, 1908, and suspended December 17, 1908. The edgestone was reset, the paving done and the cinder foundation laid this fall. The work will be completed early in the spring.

Worthington street, in front of the Normal School. The contract for setting the edgestone, laying the gutters, brick sidewalks and loam spaces was awarded to Charles W. Kinney November 11, 1907. Work was begun November 12, 1907, and suspended December 19, 1907. It was resumed April 6, 1908, and completed May 16, 1908. The edgestone, vitrified bricks for the gutter and sidewalk bricks were furnished by the city on the line of the work.

Roxbury street, at the estate of H. S. Lawrence. An old wall on the street line, with its top about eight (8) inches below the present surface of the brick sidewalk had been covered with planks. These planks having become loose and rotten, the sidewalk was in a dangerous condition. To permanently remedy this, the old covering was removed and a wide bluestone cap was laid on the wall, flush with the brick sidewalk. A part of the brick sidewalk was also relaid. All the work was done by the Street Department forces.

Terrace street retaining wall. The contract for constructing a Portland cement retaining wall, about 108 feet long, at the Park Brewery, was awarded to James Doherty July 24, 1908. Work was begun July 29, 1908, and completed August 10, 1908. The contractor furnished all the materials.

Allston street, from Brighton avenue to Commonwealth avenue, is about 1,842 feet long. The work of constructing this street was done by the Street Department force. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, granite edgestone and crushed stone sidewalks, seven (7) feet in width. In doing the subgrading a considerable amount of rock had to be removed.

Cohasset street, between Corinth street and Albano street, is about 1,014 feet long. This street was constructed by the Street Department force. It is a thirty-five (35) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters and six (6) foot crushed stone sidewalks. The roadway which was formerly macadam was resurfaced with about four (4) inches of crushed stone.

FINANCIAL STATEMENT.

Maintenance appropriation for 1908-09	\$850,000 00	
Amount collected for work done and materials furnished for different departments, companies and in- dividuals, including inspectors' services and sale of crushing plants,* etc.	* 13,565 09	
		\$863,565 09
Less amount transferred to Ferry Division	\$20,023 32	
Less amount transferred to Lamp Division	9,500 00	
Less amount transferred to Treasury Department	60 34	
		29,583 66
		\$833,981 43
Expenditures from February 1, 1908, to Janu- ary 31, 1909		<u>\$833,981 43</u>

STREET IMPROVEMENTS.

Appropriation for year 1908-09	\$249,000 00	
Amount collected from Boston Tran- sit Commission for work done and materials furnished	615 00	
		\$249,615 00
Unexpended balance February 1, 1908		5,052 31
		\$254,667 31
Expenditures from February 1, 1908, to Janu- ary 31, 1909		177,566 28
Unexpended balance January 31, 1909		<u>\$77,101 03</u>

OLD COLONY AVENUE, CONSTRUCTION OF.

Transferred from appropriation for Copley square, betterment and relocation of	\$40,000 00	
Expenditures from February 1, 1908, to January 31, 1909	7,577 39	
Unexpended balance January 31, 1909		<u>\$32,422 61</u>

* Does not include sale of Grove street crushing plant in exchange for 1,000 tons of crushed stone delivered on streets in West Roxbury.

HIGHWAYS, MAKING OF.

Expenditures from February 1, 1908, to January 31, 1909 \$99,412 74

TOTAL EXPENDITURES.

Maintenance appropriation . . .	\$833,981 43	
Street improvements	177,566 28	
Old Colony avenue, construction of, ...	7,577 39	
Highways, making of	99,412 74	
		\$1,118,537 84

INCOME.

Statement showing the amount of bills deposited with the City Collector from February 1, 1908, to January 31, 1909, and credited to General Revenue:

On account of edgestone and side-walk assessments	\$614 79	
Sale of horses	418 50	
Sale of junk and removing abutment walls	58 73	
Return premium on insurance policy	45 12	
		\$1,137 14

Amount paid into the city treasury during the year:

On account of edgestone and side-walk assessments	\$6,581 91	
Sale of horses	418 50	
Removing abutment walls	51 00	
Return premium on insurance policy	45 12	
		\$7,096 53

Objects of Expenditures from the Regular Appropriation, Classified by Districts, from
February 1, 1908, to January 31, 1909.

Districts.	Repairs.	Snow.	Edgestone and Sidewalk Repairs.	Repairing Fences.	Repairing Plank Walks.	Schedule A, Miscel- laneous.	Schedule B, Street Work.	Schedule C, in Addition to Amount Charged to Appropriation for Street Improvements.	Total.
1. South Boston.....	\$4,336 02	\$4,574 34	\$8,135 25	\$1,169 73	\$132 25	.....	\$6,912 94	\$623 41	\$25,883 94
2. East Boston.....	5,413 91	2,487 49	7,854 80	1,331 88	19 66	.....	581 88	4,289 78	21,979 40
3. Charlestown.....	6,768 94	3,202 88	4,561 73	165 09	97 18	.....	5,752 90	283 97	20,832 69
4. Brighton.....	5,753 56	4,157 60	3,373 52	109 66	6 00	.....	16,089 02	2,278 51	31,767 87
5. West Roxbury.....	10,989 34	8,257 71	2,745 06	1,246 27	268 86	.....	23,370 03	1,637 58	48,514 85
6. Dorchester.....	7,715 98	3,021 98	6,078 18	240 88	.....	.....	16,474 06	3,036 05	36,567 13
7. Roxbury.....	6,714 17	9,451 07	10,369 41	705 54	1,567 80	.....	13,410 28	3,511 30	45,729 57
8. South End.....	13,769 33	7,615 75	10,268 78	1,361 87	.....	.....	17,974 97	5,386 36	56,377 06
9. Back Bay.....	4,023 89	4,213 01	8,428 80	399 81	14 18	.....	10,688 98	10,816 88	38,585 55
10. North End.....	12,850 58	9,182 61	5,590 09	16 22	.....	.....	5,922 01	8,467 37	42,028 88
12. Ashmont.....	2,905 96	1,978 93	2,672 44	640 10	95 00	.....	4,428 08	1,208 71	13,929 22
	.....	.....	.....	.....	.....	\$451,785 27	.....	.....	451,785 27
Totals.....	\$81,241 68	\$58,143 37	\$70,078 06	\$7,387 05	\$2,200 93	\$451,785 27	\$121,605 15	\$41,539 92	\$833,981 43

SCHEDULE A.

Central office expense	\$12,655 81
Salary of superintendent	\$5,354 17
Salaries of office employees	5,277 95
Automobile expense	931 03
Printing and stationery	755 08
Telephone service	136 39
Typewriter	95 32
Traveling expense	62 47
Furniture	39 40
Messenger service	1 45
Sundries	2 55
Salary of Superintendent J. H. Doyle	83 33
Salary of Acting Superintendent Wm. Jackson	166 67
Salary of deputy superintendent	3,486 11
Salaries of office employees	13,378 86
Salary of chief engineer	3,000 00
Salaries of assistant engineers, etc.	8,905 26
Salaries of Permit Office employees	6,874 43
Salaries of inspectors	23,766 78
Salaries of Supply Department employees	552 77
Automobile, Superintendent of Streets	1,500 00
Automobile, Deputy Superintendent (net)	715 00
Automobile expense, including wages of chauffeur, repairs, etc.	2,802 71
Automobile insurance	127 30
Automobile registration	5 00
Advertising	173 94
Asphalt analysis	50 00
Derricks, repairing, etc.	314 15
Dumping boat service	34 75
Expressage and freight charges	12 71
Clock repairs	12 00
Electrical appliances, labor and stock	792 90
Furniture	6 00
Fuel and oil	3,525 33
Ice	81 14
Electric and gas lighting	947 89
Messenger service	29 00
Newspapers, magazines, etc.	70 33
Oatmeal	106 10
Printing and stationery	5,427 99
Rent of towels	106 40
Stoves, pipes, grates, etc.	36 01
Taxes	2,207 37
Telephone service	1,995 12
Traveling expense	414 85
Tallying traffic on bridges	56 50
Carried forward	\$94,420 51

<i>Brought forward</i>	\$94,420	51
Traverse street subway, repairs	244	15
Rent of land	10,551	46
Engineering supplies and incidentals	594	80
Holidays (not including holidays charged on street accounts)	41,769	53
Pay allowed injured employees	1,199	82
Medical attendance on injured employees	1,553	00
Soap for office	8	22
Steam roller insurance	27	06
Signs and numbers	7,563	18
Removing rubbish, Chelsea fire	37	75
Removing rubbish, Cambridge street fire	20	56
Ladder for Permit Office	3	50
Removing night soil	15	00
Keys, etc.	5	45
Testing bricks	30	00
Repairing safe	16	00
Photographs	36	00
Sundries	20	75
Tools, new and cost of repairing, etc	17,939	19
Executions of court and damages	1,135	85
Materials sold and work done for other depart- ments and individuals	*361	20
Snow dump, Dorchester avenue	437	50
Harvard Street Bridge, Dorchester, putting up fence	110	00
Roxbury street, retaining wall	12	50
Artificial stone sidewalks, rebates allowed and repairs	9,497	66
Asphalt pavements repaired	19,502	26
Crossings, new	2,846	14
Crossings repaired	1,125	54
Bitulithic pavements repaired	101	85
Fences and plank walks, new	1,473	20
Edgestones and sidewalks, new	12,091	23
Tar concrete sidewalks	769	44
Street cleaning	80,968	35
Repairing offices, stables, sheds, etc.	7,678	88
Repairing shanties	133	52
Street watering	492	00
Sanding icy streets and sidewalks	2,071	86
Asphalting carriage wash at Child Street Yard	125	00
Veterinary services	1,644	69
Expenses of yards and stables, including horses and wagons, cost of caring for horses, repairs to carts, harnesses, etc.	\$192,585	82
<i>Carried forward</i>	\$192,585	82
	\$328,634	60

*Paid through Collecting Department \$223.89.

<i>Brought forward</i> . . .	\$192,585 82	\$328,634 60
Less amount earned by depart- ment teams	97,166 62	
		95,419 20
Stock, materials	\$49,149 35	
Stock, handling and teaming	37,306 11	
	\$86,455 46	
Less stock delivered on streets	53,357 21	
		33,098 25
		<u>\$457,152 05</u>
Steam rollers, cost of operating and re- pairs	\$21,357 02	
Less amount earned by steam rollers	22,817 00	
		\$1,459 98
Crushed stone deliv- ered on streets	*\$67,624 80	
Less cost of maintain- ing and operating crushers	63,718 00	
		3,906 80
		5,366 78
		<u>\$451,785 27</u>

SCHEDULE B.

STREET WORK. PAID OUT OF MAINTENANCE APPROPRIATION.

Albany street, Randolph street to Bristol street,
work completed in 1907:

Hired teams \$376 00

Alford street, from Everett line to drawbridge.
Repaved roadway, reset edgestone and relaid
brick sidewalks. Length, 832 feet. Area,
2,607 square yards. Relaid 560 square yards
sidewalks:

Labor furnished by the city	\$1,754 44	
Teaming furnished by the city	323 69	
Gravel furnished by the city	238 88	
Lumber furnished by the city	55 35	
Bricks furnished by the city	15 12	
Cement furnished by the city	93	
Sand furnished by the city	30	
Nails furnished by the city	08	
		<u>\$2,388 79</u>

* Includes credit of \$1,250 for sale of Grove street crushing plant in exchange for 1,000 tons of crushed stone furnished in West Roxbury.

Anawan avenue, from Beech street to the railroad.

Roadway resurfaced with 6-inch macadam.

Length, 708 feet. Area, 2,202 square yards.

Labor furnished by the city . . .	\$141 61
Teaming furnished by the city . . .	267 75
Water cart furnished by the city . .	33 00
Stone furnished by the city . . .	516 56
Gravel furnished by the city . . .	13 87
Steam roller	104 00

\$1,076 79

Appleton street, from Berkeley street to Columbus avenue. Roadway resurfaced with stone picked from street. Length, 1,146 feet. Area, 3,827 square yards.

Labor furnished by the city . . .	\$302 62
Teaming furnished by the city . . .	24 30
Water cart furnished by the city . .	32 40
Stone dust furnished by the city . .	77 82
Steam roller	136 50

\$573 64

Ashland street, Elm to Park street. Resurfaced with 6-inch macadam. Length, 355 feet. Area, 790 square yards.

Labor furnished by the city . . .	\$54 00
Teaming furnished by the city . . .	103 50
Stone furnished by the city . . .	233 28
Steam roller furnished by the city . .	39 00

\$429 78

Beacon street, from Arlington to Brimmer street.

Asphalted with American Rock asphalt and regulated. Length, 364 feet. Area, 1,519 square yards.

Engineering and inspection	\$159 75
Advertising	14 75
Incidentals	20

Amount paid to Jones & Meehan, under contract:

95 linear feet edgestone set

@ 25c. \$23 75

1,506 square yards bituminous concrete binder and asphalt wearing surface furnished and laid @ \$1.90

2,861 40

12.3 cubic yards extra bituminous binder furnished and laid @ \$8

98 40

Carried forward \$2,983 55

\$174 70

<i>Brought forward</i>	\$2,983 55	\$174 70
3.3 cubic yards extra cement, concrete base, furnished and laid @ \$6	19 80	
35 square yards brick side- walks furnished and laid @ \$1	35 00	
Extra work—Chip con- crete base at the inter- section of Beacon and Arlington streets:		
78½ hours labor @ 25c.	19 63	
Plus 15 per cent on \$19.63	2 94	
Extra work—Omit granite block paving with gravel joints and substitute granite block paving with pitch and pebble joints:		
13 square yards granite block paving laid, pitch and pebble joints, @ \$1.15,	14 95	
		3,075 87
		<u>\$3,250 57</u>
<i>Beacon street</i> , from Hereford street to Massachu- setts avenue. Work completed in 1907.		
Labor furnished by Barber Asphalt Paving Company		<u>\$38 00</u>
<i>Beacon street</i> , from Cleveland circle to Brookline line. Roadway resurfaced with 4-inch mac- adam. Length, 1,000 feet. Area, 5,333 square yards.		
Labor furnished by the city	\$399 43	
Teaming furnished by the city	319 50	
Water cart furnished by the city	69 00	
Steam roller furnished by the city	273 00	
Stone	1,687 35	
		<u>\$2,748 28</u>
<i>Bellevue street</i> , from Robin street to the railroad bridge. Resurfaced with 4-inch macadam. Length, 3,825 feet. Area, 8,925 square yards.		
Labor furnished by the city	\$270 14	
Teaming furnished by the city	1,020 75	
Water cart furnished by the city	135 00	
Steam roller furnished by the city	377 00	
Stone furnished by the city	1,785 50	
Gravel furnished by the city	158 20	
		<u>\$3,746 59</u>

Bigelow street, from 60 feet west of Dunboy to Brooks street, and at the intersection of Charlesview street. Area, 1,950 square yards. Resurfaced with 4-inch macadam, 133½ square yards gutters paved.

Labor furnished by the city	. .	\$551 76
Teaming furnished by the city	. .	361 88
Stone furnished by the city	. .	439 27
Stone strippings furnished by the city,		165 59
Gravel furnished by the city	. .	15 00
Lumber furnished by the city	. .	1 91
Steam roller furnished by the city	. .	269 75

\$1,805 16

Blagden street, from Exeter street to Huntington avenue. Roadway resurfaced with 3-inch macadam and coated with tarvia. Length, 490 feet. Area, 1,457 square yards.

Labor furnished by the city	. .	\$160 62
Teaming furnished by the city	. .	89 25
Water cart furnished by the city	. .	12 00
Stone furnished by the city	. .	214 19
Tarvia furnished by the city	. .	105 00
Steam roller furnished by the city	. .	65 00

\$646 06

Blue Hill avenue, from Talbot avenue to Mattapan square. Roadway treated with tarvia B.

29,663 square yards roadway treated with tarvia B.

\$1,186 52

Bowdoin street, from Hancock to Blakeville street. Roadway top cut down and resurfaced with 2-inch macadam in places. Length, 3,300 feet. Area, 9,200 square yards.

Labor furnished by the city	. .	\$73 63
Teaming furnished by the city	. .	270 00
Stone furnished by the city	. .	234 56
Steam roller furnished by the city	. .	45 50

\$623 69

Braemore road, from Chiswick road to Commonwealth avenue. Resurfaced with 7-inch macadam. Length, 450 feet. Area, 1,300 square yards.

Labor furnished by the city	. .	\$377 76
Teaming furnished by the city	. .	143 15
Stone furnished by the city	. .	309 65
Strippings furnished by the city	. .	95 13
Lumber furnished by the city	. .	23
Steam roller furnished by the city	. .	201 50

\$1,127 42

Bristol street, from Albany street to Harrison avenue. Repaved roadway with old blocks. Length, 575 feet. Area, 680 square yards. Edgestone reset and 372 square yards brick sidewalks relaid.

Labor furnished by the city	. . .	\$344 00
Bricks furnished by the city	. . .	32 12
Gravel and sand furnished by the city		103 50

\$479 62

Brookline avenue, from Boylston street to Jersey street. Resurfaced sidewalks with crushed stone.

Stone furnished by the city		
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\$138 47

Brookline avenue, Audubon road to Bellevue street. Roadway resurfaced with 4-inch macadam on the westerly side. Length, 463 feet. Area, 865 square yards. From Bellevue street to the Parkway patched with macadam. From Parkway to Brookline line resurfaced with 4-inch macadam. Area, 1,400 square yards.

Labor furnished by the city	. . .	\$262 50
Teaming furnished by the city	. . .	292 85
Water cart furnished by the city	. . .	44 70
Stone furnished by the city	. . .	413 75
Gravel furnished by the city	. . .	3 93
Lumber furnished by the city	. . .	75
Steam roller furnished by the city	. . .	188 50

\$1,206 98

Brunswick street, from Blue Hill avenue to Warren street. Roadway resurfaced with 4-inch macadam. Length, 470 feet. Area, 1,044 square yards.

Labor furnished by the city	. . .	\$267 63
Teaming furnished by the city	. . .	134 75
Stone furnished by the city	. . .	340 00
Steam roller furnished by the city	. . .	65 00

\$807 38

Cambridge street, Sparhawk street to Washington street, and Harvard avenue to the railroad. Patched with macadam.

Stone furnished by the city	. . .	\$506 86
Gravel furnished by the city	. . .	4 65
Teaming furnished by the city	. . .	51 00
Steam roller furnished by the city	. . .	91 00

\$653 51

Centre street, from Walden street to Forbes street on the east side; from Walden street to Wyman street on the west side; and from Creighton street to Hyde square on the west side. Length, 1,797 feet, west side; 1,096 feet, east side. Area, 3,819 square yards. Roadway resurfaced with 4-inch macadam; 405 square yards gutters relaid; 27 square yards crossings relaid; 189 feet edgestone reset; and 152 square yards brick sidewalks relaid.

Labor furnished by the city . .	\$361 75	
Teaming furnished by the city . .	397 65	
Stone furnished by the city . .	788 77	
Gravel furnished by the city . .	55 90	
Sand furnished by the city . .	10 15	
Bricks furnished by the city . .	19 14	
Steam roller furnished by the city .	318 50	
		\$1,951 86

Centre street, from May street to 500 feet beyond Louder's lane, at Nervine Hospital, West Roxbury. Length, 1,300 feet. Area, 3,611 square yards. Roadway resurfaced with 4-inch macadam.

Teaming furnished by the city . .	\$519 00	
Stone furnished by the city . .	467 04	
Gravel furnished by the city . .	98 70	
Steam roller furnished by the city .	123 50	
		\$1,208 24

Chelsea Bridge, Charlestown. Repaired plank walk.

Labor furnished by the city . .	\$58 25	
Teaming furnished by the city . .	15 75	
Lumber furnished by the city . .	75 82	
Nails furnished by the city . .	20	
		\$150 02

Cherokee street, Roxbury. Plankwalk.

Lumber furnished by the city	\$44 46	
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Chestnut Hill avenue, from Commonwealth avenue to Brookline line. Length, 900 feet. Area, 4,800 square yards. Resurfaced with 2.2-inch macadam.

Labor furnished by the city . .	\$128 69	
Teaming furnished by the city . .	172 70	
Stone furnished by the city . .	612 15	
Steam roller furnished by the city .	123 50	
		\$1,037 04

Chestnut avenue, from Paul Gore street to Mozart street. Length, 730 feet. Area, 1,569 square yards. Resurfaced with 5-inch macadam.

Labor furnished by the city . . .	\$153 38
Teaming furnished by the city . . .	86 41
Stone furnished by the city . . .	667 81
Steam roller furnished by the city . . .	104 00

\$1,011 60

Church street, from High street to Winter street, Dorchester (work done in 1907).

Gravel furnished by the city	\$48 00
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Columbia road, from Boston street to Dudley street (westerly side). Length, 1,600 feet. Area, 4,444 square yards. Resurfaced with 3-inch macadam.

Labor furnished by the city . . .	\$490 86
Teaming furnished by the city . . .	778 25
Stone furnished by the city . . .	974 72
Gravel furnished by the city . . .	2 59
Steam roller furnished by the city . . .	604 50

\$2,850 92

Cross street, from Salem street to Haymarket square. Length, 523 feet. Area, 1,223 square yards. Repaved roadway, reset edgestones, relaid crosswalks and brick sidewalks.

Labor furnished by the city . . .	\$414 26
Teaming furnished by the city . . .	93 62
Gravel furnished by the city . . .	124 50
Brick, sand and lumber furnished by the city	6 00
Flagging furnished by the city . . .	5 00

\$643 38

D street, from West Fifth street to West Seventh street (work done in 1907).

Teaming furnished by the city . . .	\$17 50
Final payment to William Higgins, under contract, for work done in 1907	270 02

\$287 52

Dorchester street, from First street to water line (work done in 1907).

Teaming furnished by the city . . .	\$31 72
Gutter blocks furnished by the city . . .	1,469 40
Final payment to Suffolk Contracting Company, under contract for work done in 1907	177 76

\$1,678 88

Dorchester avenue, from Adams street to Park street, Dorchester (work done in 1907).

Final payment to Daniel E. Lynch, as per contract, for work done in 1907

\$185 87

Dorchester avenue, from Park street to Ashmont street, Dorchester. Length, 4,600 feet. Area, 11,500 square yards. Top surface taken off and resurfaced with 2-inch macadam.

Labor furnished by the city . . .	\$70 62
Teaming furnished by the city . .	150 00
Stone furnished by the city . . .	183 92
Stone dust furnished by the city . .	22 40
Steam roller furnished by the city .	32 50

\$459 44

Dover street, from Albany street to Harrison avenue (work done in 1907).

Teaming furnished by the city

\$45 00

Dunboy street, from Faneuil street to Bigelow street. Length, 600 feet. Area, 1,330 square yards. Resurfaced with 3-inch macadam.

Labor furnished by the city . . .	\$161 12
Teaming furnished by the city . .	113 75
Strippings furnished by the city . .	97 15
Steam roller furnished by the city .	91 00
Gravel furnished by the city . . .	36 00
Stone furnished by the city . . .	20 74

\$519 76

East Cottage street, from Pleasant street to Columbia road (work done in 1907).

Stone furnished by the city

\$18 48

East Cottage street, from Dudley street to the railroad bridge. Length, 1,350 feet. Area, 3,190 square yards. Resurfaced with 3-inch macadam.

Labor furnished by the city . . .	\$401 76
Teaming furnished by the city . .	153 25
Stone furnished by the city . . .	501 94
Stone dust furnished by the city . .	42 90
Steam roller furnished by the city .	169 00
Gravel furnished by the city . . .	10 40
Bricks and sand furnished by the city .	7 90

\$1,287 15

East Cottage street, from Edward Everett square to the railroad bridge. Length, 1,900 feet. Area, 5,911 square yards. Resurfaced with $1\frac{3}{4}$ -inch macadam.

Labor furnished by the city . . .	\$319 50
Teaming furnished by the city . . .	644 25
Stone furnished by the city . . .	698 36
Stone dust furnished by the city . . .	18 00
Steam roller furnished by the city . . .	253 50

\$1,933 61

East Fifth street, from G street to H street (work done in 1907).

Teaming furnished by the city . . .	\$61 00
Gravel furnished by the city . . .	30 03

\$91 03

East Sixth street, from O street to P street (work done in 1907).

Teaming furnished by the city . . .	\$14 00
Gravel furnished by the city . . .	37 50
Bricks furnished by the city . . .	57 50
Final payment to Peter J. Herr, Jr., as per contract, for work done in 1907	112 72

\$221 72

Esmond street, from Blue Hill avenue to Bradshaw street. Length, 920 feet. Area, 2,960 square yards. Reset edgestones, repaved gutters and sodded loam spaces.

Engineering and inspection furnished by the city	\$161 54
Teaming furnished by the city . . .	2 25
Engineering expense	3 05
Amount paid to Daniel E. Lynch under contract (final payment not made)	395 25

\$562 09

Everett street, from Mill street to Park street, Dorchester. Length, 618 feet. Area, 1,373 square yards. Resurfaced with 6-inch macadam.

Labor furnished by the city . . .	\$68 75
Teaming furnished by the city . . .	206 50
Stone furnished by the city . . .	375 80
Steam roller furnished by the city . . .	123 50

\$774 55

Everett street, from railroad bridge 650 feet south, Brighton. Length, 1,300 feet. Area, 3,755 square yards. Resurfaced with 4.7-inch macadam.

Labor furnished by the city . . .	\$250 37
Teaming furnished by the city . . .	209 47
Stone furnished by the city . . .	1,062 17
Steam roller furnished by the city . .	214 50
Gravel furnished by the city . . .	24 80
Sand and bricks furnished by the city,	1 43

\$1,762 74

Exeter street, from Huntington avenue to Beacon street. Length, 1,599 feet. Area, 5,237 square yards. Resurfaced with 2½ to 3½ inch macadam. Coated with tarvia from Huntington avenue to Boylston street.

Labor furnished by the city . . .	\$827 92
Teaming furnished by the city . . .	606 25
Stone furnished by the city . . .	814 76
Stone dust furnished by the city . . .	53 56
Steam roller furnished by the city . .	357 50
Tarvia furnished by the city . . .	72 00

\$2,731 99

Fairbanks street, from Washington street to Faneuil street. Length, 1,200 feet. Area, 2,666 square yards. Resurfaced with 3.5-inch macadam.

Labor furnished by the city . . .	\$223 02
Teaming furnished by the city . . .	243 00
Stone furnished by the city . . .	564 22
Steam roller furnished by the city . .	214 50

\$1,244 74

Faneuil street, from Brooks street to Oakland street. Length, 400 feet. Area, 890 square yards. Resurfaced with 8-inch macadam, average depth.

Labor furnished by the city . . .	\$165 51
Teaming furnished by the city . . .	100 88
Stone furnished by the city . . .	590 52
Steam roller, furnished by the city . .	91 00
Gravel furnished by the city . . .	4 65

\$952 56

Ferry street, from North street to Fulton street. Length, 281 feet. Area, 559 square yards. Repaved with old blocks, relaid crossings and sidewalks and reset edgestone.

Labor furnished by the city . . .	\$468 94
Teaming furnished by the city . . .	35 87
Bricks furnished by the city . . .	72 88
Gravel furnished by the city . . .	69 03
Sand and cement furnished by the city	17 93

\$664 65

Field street, from Ruggles street to 400 feet distant. Length, 400 feet. Area, 782 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city . . .	\$177 12
Teaming furnished by the city . . .	68 18
Stone furnished by the city . . .	205 84
Steam roller furnished by the city . . .	58 50
Gravel furnished by the city . . .	19 20

\$528 84

Freeport street, from Tenean street to the bridge. Length, 1,044 feet. Area, 3,248 square yards. Resurfaced with macadam 7 to 9 inches deep.

Labor furnished by the city . . .	\$296 62
Teaming furnished by the city . . .	844 75
Stone dust furnished by the city . . .	1,580 10
Steam roller furnished by the city . . .	260 00
Gravel	22 50

\$3,003 97

Fulton street, from Cross street to Clinton street and approaches of John street and Barrett street. Length, 270 feet. Area, 1,020 square yards. Repaved with old blocks, reset edge-stones, 167 feet, and relaid crosswalks and sidewalks, 140 square yards.

Labor furnished by the city . . .	\$590 22
Teaming furnished by the city . . .	180 25
Flagging furnished by the city . . .	70 97
Granite blocks furnished by the city, . . .	23 45
Gravel furnished by the city . . .	124 02
Bricks furnished by the city . . .	23 59
Sand, cement and lumber furnished by the city	2 76

\$1,015 26

Geneva avenue, from Olney street to the railroad (work done in 1907).

Teaming furnished by the city . . .	\$6 00
Stone furnished by the city . . .	75 52

\$81 52

Geneva avenue, from Bowdoin street to Park street.

Length, 2,900 feet. Area, 3,333 square yards.

Picked, rolled and coated with screenings.

Labor furnished by the city . . .	\$147 13
Teaming furnished by the city . . .	209 87
Stone dust furnished by the city . . .	280 78
Steam roller furnished by the city . . .	104 00
Gravel furnished by the city . . .	20 62

\$762 40

Greenmount street, from Dorchester avenue to Pleasant street (work done in 1907).

Teaming furnished by the city	<u>\$52 00</u>
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Hancock street, from Dorchester avenue to Bowdoin street. Length, 1,454 feet. Area, 5,000 square yards. Top picked off and resurfaced with 2-inch macadam, 300 feet gutters paved and crossing relaid.

Labor furnished by the city . . .	\$249 38
Teaming furnished by the city . . .	158 75
Stone dust furnished by the city . . .	59 91
Steam roller furnished by the city . . .	110 50
Gravel furnished by the city . . .	100 00

\$678 54

Hano street, from Braintree street 420 feet southerly. Repairing tar concrete sidewalks. Area, 495 square yards.

Amount paid Simpson Brothers Company as per contracts	<u>\$618 75</u>
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Hanover street, from Friend street to Union street, 140 square yards block paving laid (work done in 1907).

Amount paid James Doherty	<u>\$219 50</u>
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Hawes street, from Congress street to Kilby street (work not done).

Engineering expense	<u>\$21 25</u>
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High street, from Church street to Hancock street.

Length, 560 feet. Area, 1,750 square yards.

Resurfaced 8 inches deep, sidewalks built, gutters paved, retaining wall built and fences repaired.

Labor furnished by the city . . .	\$337 21
Teaming furnished by the city . . .	331 37

Carried forward \$668 58

<i>Brought forward</i>	\$668 58	
Gravel furnished by the city	310 00	
Steam roller furnished by the city	52 00	
Lumber and nails furnished by the city	18 85	
Blocks furnished by the city	4 00	
Paint and cement furnished by the city	5 93	
		<u>\$1,059 36</u>
<i>Holton street, corner Athol street at Church, Brighton (work done in 1907).</i>		
Bricks furnished by the city	\$150 00	
Sand furnished by the city	39 60	
		<u>\$189 60</u>
<i>Howard avenue, at Cunningham street. 139 feet edgestone set, 163 square yards brick sidewalks laid and 46 square yards gutters laid. Material furnished by owner.</i>		
Labor furnished by the city	\$347 11	
Teaming furnished by the city	70 25	
		<u>\$417 36</u>
<i>Humphreys street, from East Cottage street to Dudley street. Length, 1,250 feet. Area, 2,361 square yards. Resurfaced with 2-inch macadam.</i>		
Labor furnished by the city	\$76 87	
Teaming furnished by the city	271 50	
Stone furnished by the city	270 48	
Steam roller furnished by the city	136 50	
		<u>\$755 35</u>
<i>Hyde Park avenue, from Tower street to Washington street. Length, 700 feet. Area, 1,867 square yards. Resurfaced with 4-inch macadam.</i>		
Labor furnished by the city	\$107 63	
Teaming furnished by the city	165 00	
Stone furnished by the city	284 44	
Steam roller furnished by the city	91 00	
		<u>\$648 07</u>
<i>La Grange street, from Centre street to Newton line (unfinished work from 1907).</i>		
Teaming furnished by the city	\$91 00	
Watering furnished by the city	30 00	
Steam roller furnished by the city	102 00	
Gravel furnished by the city	10 22	
		<u>\$233 22</u>

Lansing street, from Warren street to Sherman street. Length, 304 feet. Area, 474 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city	.	.	\$123 50	
Teaming furnished by the city	.	.	25 97	
Stone furnished by the city	.	.	33 76	
Stone dust furnished by the city	.	.	100 57	
Steam roller furnished by the city	.	.	26 00	
Blocks furnished by the city	.	.	2 20	
				<u>\$312 00</u>

Linden Park street, filling in brook.

Labor furnished by the city	.	.	\$244 26	
Filling furnished by the city	.	.	189 60	
Lumber furnished by the city	.	.	7 34	
				<u>\$441 20</u>

Main street, from Austin street to Union street
Length, 275 feet. Area, 485 square yards.
Repaved roadway.

Labor furnished by the city	.	.	\$188 57	
Teaming furnished by the city	.	.	31 50	
Gravel furnished by the city	.	.	34 50	
				<u>\$254 57</u>

Malcolm street, from Mt. Vernon street 49 feet toward Chestnut street. Length, 49 feet. Area, 41 square yards. Removed paving blocks and resurfaced with tar macadam.

Labor furnished by the city	.	.	\$55 50	
Teaming furnished by the city	.	.	3 00	
Stone furnished by the city	.	.	39 90	
Tarvia furnished by the city	.	.	9 00	
				<u>\$107 40</u>

Maple street, from Centre street to Weld street. Length, 2,000 feet. Area, 4,445 square yards. Resurfaced with 6-inch macadam.

Labor furnished by the city	.	.	\$140 51	
Teaming furnished by the city	.	.	412 50	
Watering furnished by the city	.	.	77 75	
Stone furnished by the city	.	.	740 44	
Steam roller furnished by the city	.	.	188 50	
Gravel furnished by the city	.	.	122 10	
				<u>\$1,681 80</u>

Marlborough street, from Clarendon street to Charlesgate East* (unfinished work from 1907). Length, 721 feet. Area, 2,314 square yards; 2-inch macadam.

Labor furnished by the city	.	.	\$140	25
Teaming furnished by the city	.	.	308	60
Stone furnished by the city	.	.	239	48
Stone dust furnished by the city	.	.	39	46
Steam roller furnished by the city	.	.	175	50

\$903 29

Massachusetts avenue, from Edward Everett square to Magazine street. Length, 3,250 feet. Area, 9,388 square yards. Resurfaced with 2-inch macadam.

Labor furnished by the city	.	.	\$344	63
Teaming furnished by the city	.	.	802	50
Watering furnished by the city	.	.	27	00
Stone furnished by the city	.	.	1,160	88
Steam roller furnished by the city	.	.	325	00

\$2,660 01

Massachusetts avenue, from Albany street to Washington street, north side. Length, 1,293 feet. Area, 3,017 square yards. Resurfaced with 4-inch macadam taken from Gerard street.

Labor furnished by the city	.	.	\$295	12
Teaming furnished by the city	.	.	142	40
Steam roller furnished by the city	.	.	214	50
Stone furnished by the city	.	.	99	36
Gravel and dust furnished by the city,	.	.	8	40

\$759 78

Medford street, from Mystic street to Main street, Charlestown. Reset 392 feet edgestone, relaid 926 square yards block paving and 269 square yards brick paving.

Labor furnished by the city	.	.	\$835	57
Teaming furnished by the city	.	.	59	50
Gravel furnished by the city	.	.	68	25
Bricks furnished by the city	.	.	42	26
Edgestone furnished by the city	.	.	5	60
Blocks furnished by the city	.	.	3	00
Sand furnished by the city	.	.	5	40
Lumber and cement furnished by the city	.	.	1	57

\$1,021 15

Melcher street, from Summer street 484 feet southeasterly (work done in 1907).

Engineering	.	.	\$22	25
Teaming furnished by the city	.	.	28	00
Gravel furnished by the city	.	.	38	61
Final payment to Peter W. Hill under contract for work done in 1907	.	.	292	37

\$381 23

Mercer street, from Telegraph street to East Eighth street. Length, 500 feet. Area, 1,032 square yards. Resurfaced with 6 to 7 inch macadam.

Labor furnished by the city	. .	\$413 25
Horse roller furnished by the city	. .	88 50
Stone furnished by the city	. .	344 61

\$846 36

Mishawum street, from Main street to Rutherford avenue, northerly side. Length, 273 feet. Area, 215 square yards, sidewalk. New brick sidewalks laid. Macadam roadway laid, 63 square yards; block paving laid, 136 square yards; flagging crosswalks laid and edgestone reset.

Labor furnished by the city	. .	\$313 59
Teaming furnished by the city	. .	135 75
Stone furnished by the city	. .	15 00
Gravel furnished by the city	. .	16 20
Sand furnished by the city	. .	15 60
Corners (seconds) furnished by the city		14 40
Flagging (seconds) furnished by the city		7 60
Blocks (seconds) furnished by the city,		2 75
Lumber and cement furnished by the city		3 62

\$524 51

Morton street, from Canterbury street to Forest Hills street, West Roxbury. Length, 4,200 feet. Area, 10,267 square yards. Resurfaced with 2-inch macadam.

Labor furnished by the city	. .	\$79 24
Teaming furnished by the city	. .	798 00
Watering furnished by the city	. .	90 00
Stone furnished by the city	. .	1,108 32
Steam roller furnished by the city	. .	266 50
Gravel furnished by the city	. .	50 40

\$2,392 46

Morton street, near Blue Hill avenue. Length, 154 feet. Area, 257 square yards. Filled, 12.3 cubic yards; macadamized, 257 square yards roadway; 180 square yards sidewalks built; 133 feet edgestone set and 55 square yards block gutters laid.

Labor furnished by the city	. .	\$114 84
Teaming furnished by the city	. .	65 00

Carried forward \$179 84

<i>Brought forward</i>	\$179 84
Stone furnished by the city	126 00
Steam roller furnished by the city	58 50
Blocks furnished by the city	12 50
Lumber furnished by the city	75 25

\$452 09

Moss Hill road, from Pond street to Woodland road. Length, 900 feet. Area, 2,300 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city	\$175 50
Teaming furnished by the city	288 75
Stone furnished by the city	450 28
Steam roller furnished by the city	143 00
Gravel furnished by the city	43 40
Watering furnished by the city	47 50

\$1,148 43

Mt. Washington Avenue Bridge. Removing blocks over deck and tearing up deck.

Labor furnished by the city	\$1,662 77
Teaming furnished by the city	253 75

\$1,916 52

Munroe street, from Humboldt avenue to Warren street. Length, 1,054 feet. Area, 2,467 square yards. Resurfaced with 5-inch macadam; 27 square yards gutters paved.

Labor furnished by the city	\$473 77
Teaming furnished by the city	79 28
Watering furnished by the city	49 84
Stone furnished by the city	696 68
Steam roller furnished by the city	182 00
Brick, gravel and sand furnished by the city	8 35

\$1,489 92

North Beacon street, from Dustin street to the Charles river on the southerly side, and from Market street to Vineland street on the northerly side. Length, 5,000 feet. Area, 12,222 square yards. Resurfaced with macadam, 2.1 inches average depth.

Labor furnished by the city	\$351 66
Teaming furnished by the city	332 25
Stone furnished by the city	841 59
Steam roller furnished by the city	227 50
Gravel furnished by the city	93 15

\$1,846 15

Norway street, from Hemenway street to Massachusetts avenue. Length, 720 feet. Area, 1,667, square yards. Resurfaced with macadam, 3.85 inches average depth.

Labor furnished by the city . . .	\$246 51
Teaming furnished by the city . . .	75 40
Stone furnished by the city . . .	380 34
Steam roller furnished by the city . .	102 00

\$804 25

Oakridge street, from Codman street to Morton street. Repaired over sewer trench.

Stone furnished by the city . . .	\$48 40
Steam roller furnished by the city . .	13 00

\$61 40

Old road, from Elmo street to Glenway street. Area, 1,166 square yards. Earth and rock excavation. (Unfinished work of 1907.)

Labor furnished by the city	\$27 38
Teaming furnished by the city	3 00
Gravel furnished by the city	2 22
Final payment to James F. Murphy, as per contract:	

209 cubic yards subgrading earth excavation @ 50c. . . . \$104 50

957 cubic yards subgrading rock excavation @ \$3.50 . . . 3,349 50

Extra work, haul stone to Codman street crusher:

. 1,658.12 tons stone hauled to Codman street crusher @ 11 c. 547 18

\$4,001 18

Less amount paid in 1907 . . . 2,405 92

1,595 26

\$1,627 86

Olney street, from Bowdoin street to Everton street (work done in 1907).

Teaming furnished by the city	\$128 00
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Perkins street, from South Huntington avenue to Day street. Length, 519 feet. Area, 1,349 square yards. Resurfaced with 2½-inch macadam.

Labor furnished by the city	\$120 50
Teaming furnished by the city	40 75

Carried forward \$161 25

<i>Brought forward</i>	\$161 25	
Watering furnished by the city	12 00	
Stone furnished by the city	251 89	
Steam roller furnished by the city	84 50	
		<u>\$509 64</u>
<i>Peters street</i> , from East Sixth street to East Seventh street. Length, 451 feet. Area, 168 square yards. New edgestones set and gutters paved with old blocks.		
Labor furnished by the city	\$400 51	
Edgestones furnished by the city	141 93	
Teaming furnished by the city	65 65	
		<u>\$608 09</u>
<i>Pleasant street</i> , from Savin Hill avenue to Stoughton street. Length, 750 feet. Area, 1,500 square yards. Resurfaced with 2-inch macadam.		
Labor furnished by the city	\$115 50	
Teaming furnished by the city	83 38	
Stone furnished by the city	104 40	
Stone dust furnished by the city	28 32	
Steam roller furnished by the city	110 50	
		<u>\$442 10</u>
<i>Porter street</i> , from Amory street toward Bismarck street (work done in 1907).		
Teaming furnished by the city	\$38 00	
Gravel furnished by the city	43 50	
		<u>\$81 50</u>
<i>Prince street</i> , at corner of Hanover street (work done in 1906). Bitulithic pavement laid.		
Final payment to Warren Brothers Company, on contract		<u>\$22 20</u>
<i>Quincy street</i> , from Blue Hill avenue to Columbia road (work done in 1907).		
Teaming furnished by the city	\$119 50	
Stone furnished by the city	2 16	
		<u>\$121 66</u>
<i>Robinwood avenue</i> , from Rockview street to Centre street. Length, 1,950 feet. Area, 3,824 square yards. Resurfaced with 4-inch macadam.		
Teaming furnished by the city	\$319 75	
Stone furnished by the city	382 24	
Steam roller furnished by the city	136 50	
Gravel furnished by the city	70	
		<u>\$839 19</u>

Rockview street, from Spring Park avenue to Robinwood avenue. Length, 500 feet. Area, 1,445 square yards. Resurfaced with 4-inch macadam.

Teaming furnished by the city . . .	\$163 25
Stone furnished by the city . . .	189 76
Steam roller furnished by the city . . .	65 00

\$418 01

Rosseter street, from Eldon street to 400 feet north of Bullard street. Length, 900 feet. Area, 2,500 square yards. Resurfaced with 5-inch macadam.

Labor furnished by the city . . .	\$228 98
Teaming furnished by the city . . .	471 25
Stone furnished by the city . . .	867 68
Steam roller furnished by the city . . .	195 00

\$1,762 91

Rutherford avenue, from Essex street to Baldwin street (work done in 1907).

Final payment to James J. Brock on contract for work done in 1907	
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\$260 58

Ruthven street, from Elm Hill avenue toward Humboldt avenue (work not finished). Resurfaced about 650 square yards with 6-inch macadam.

Labor furnished by the city . . .	\$221 75
Teaming furnished by the city . . .	28 00
Stone furnished by the city . . .	121 76
Steam roller furnished by the city . . .	19 50

\$391 01

Rutledge street, West Roxbury. Surface drain filled with old cobbles.

Labor furnished by the city . . .	\$58 50
Teaming furnished by the city . . .	61 25
Stone furnished by the city . . .	65 80
Gravel furnished by the city . . .	6 55
Drain pipe furnished by the city . . .	42

\$192 52

St. Botolph street, from Irvington street to Massachusetts avenue. Length, 2,240 feet. Area, 6,805 square yards. Resurfaced with macadam, average depth $1\frac{3}{4}$ inches.

Labor furnished by the city . . .	\$641 30
Teaming furnished by the city . . .	264 35

Carried forward \$905 65

<i>Brought forward</i>	\$905 65
Stone furnished by the city	509 46
Steam roller furnished by the city	276 00
Sand furnished by the city	7 75
Gravel furnished by the city	7 45
Watering furnished by the city	57 20

\$1,763 51

St. Stephen street, from Massachusetts avenue to Bryant street. Patched with macadam.

Labor furnished by the city	\$89 88
Teaming furnished by the city	42 80
Stone furnished by the city	146 28
Steam roller furnished by the city	60 00

\$338 96

Saratoga street, from Boston, Revere Beach & Lynn Railroad to Winthrop Bridge. Area, 11,875 square yards. Treated with tar preparation.

Amount paid American Tar Company

\$581 88

Savin Hill avenue, from Dorchester avenue to the railroad. Length, 1,200 feet. Area, 3,730 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city	\$243 39
Teaming furnished by the city	306 00
Stone furnished by the city	398 36
Steam roller furnished by the city	188 50
Gravel furnished by the city	58 85

\$1,195 10

South street, from Child street to the Arborway. Length, 1,750 feet. Area, 3,889 square yards. Resurfaced with 4-inch macadam.

Teaming furnished by the city	\$312 75
Watering furnished by the city	48 00
Stone furnished by the city	659 44
Steam roller furnished by the city	136 50

\$1,156 69

Southampton street, from Massachusetts avenue to the bridge (work done in 1907). Cinder sidewalks.

Teaming furnished by the city	\$1,039 00
Stone furnished by the city	77 44

\$1,116 44

Stoughton street, from Pleasant street to Columbia road. Length, 1,522 feet. Area, 3,764 square yards. Resurfaced with 4-inch macadam and repaved gutters in places.

Labor furnished by the city . . .	\$333 88	
Teaming furnished by the city . . .	152 25	
Stone furnished by the city . . .	207 12	
Stone dust furnished by the city . . .	9 60	
Steam roller furnished by the city . . .	123 50	
		<u>\$826 35.</u>

Summer street, from bridge over A street to bridge over New York, New Haven & Hartford Railroad. Length, 372 feet. Area, 2,476 square yards. Repaved with old blocks on gravel base and 425 feet plankwalk relaid.

Labor furnished by the city relaying plankwalk	\$260 13	
Engineering and inspection on contract	164 75	
Lumber furnished by the city . . .	227 25	
Engineering expense	2 05	
Advertising furnished by the city . . .	14 85	
Blocks furnished by the city . . .	13 37	
Edgestone furnished by the city . . .	4 73	
Nails furnished by the city	2 80	
Amount paid to James P. Collins as per contract for repaving roadway	810 40	
		<u>\$1,500 33</u>

Summer street, south side, from Melcher street to A street. Length, 276 feet. Area, 3,330 square yards. Repairing granolithic sidewalk. Work not finished.

Labor furnished by the city, including engineering and inspection		\$141 67
Advertising		9 38
Engineering expenses		60
Amount paid to Warren Brothers Company, under contract:		
3,100 square feet artificial stone sidewalk laid @ 7 c. (unfinished)	\$217 00	
276 linear feet edgestone reset @ 11c.	30 36	
<i>Carried forward</i>	\$247 36	<u>\$151 65</u>

<i>Brought forward</i>	\$247 36	\$151 65
318 square yards granite block paving relaid @ 38c.	120 84	
	\$368 20	
Less 15 per cent retained	55 23	
		312 97
		<u>\$464 62</u>
 <i>Sutherland road</i> , from Cleveland circle to Orkney road. Length, 200 feet. Area, 444 square yards. Resurfaced with 4.8-inch macadam.		
Labor furnished by the city	\$45 75	
Teaming furnished by the city	36 75	
Stone furnished by the city	128 96	
		\$211 46
 <i>Talbot avenue</i> , from Washington street to Welles avenue. Length, 525 feet. Area, 3,033 square yards. Repaired with 3-inch macadam.		
Labor furnished by the city	\$78 37	
Teaming furnished by the city	123 00	
Watering furnished by the city	36 75	
Stone furnished by the city	467 52	
Steam roller furnished by the city	143 00	
		\$848 64
 <i>Terrace street</i> , in front of Park Brewery. Length, 107 feet 6 inches—20-inch wall. Retaining wall and fence built Portland cement concrete.		
Inspection and engineering furnished by the city	\$91 13	
Advertising furnished by the city	12 14	
Engineering expense furnished by the city	1 05	
Amount paid to James Doherty, as per contract	448 10	
		\$552 42
 <i>Townsend street</i> , from Washington street to Walnut avenue. Length, 1,066 feet. Area, 2,604 square yards. Resurfaced with 6-inch macadam.		
Labor furnished by the city	\$356 76	
Teaming furnished by the city	166 88	
Stone furnished by the city	742 16	
Steam roller furnished by the city	123 50	
		\$1,389 30

Train street, from Ashmont street to King street.

Length, 1,700 feet. Area, 3,500 square yards.

Resurfaced with 3-inch macadam.

Labor furnished by the city	.	.	\$77	63
Teaming furnished by the city	.	.	208	25
Watering furnished by the city	.	.	9	00
Stone furnished by the city	.	.	434	72
Steam roller furnished by the city	.	.	162	50
Gravel furnished by the city	.	.	9	00

\$901 10

Vermont street, from Mt. Vernon street to Baker street. Length, 2,463 feet. Area, 6,752 square yards. Resurfaced with 6-inch macadam.

Labor furnished by the city	.	.	\$300	37
Teaming furnished by the city	.	.	524	00
Watering furnished by the city	.	.	113	00
Stone furnished by the city	.	.	1,274	68
Steam roller furnished by the city	.	.	286	00
Gravel furnished by the city	.	.	285	57

\$2,783 62

Vernon street, from Cabot street to across Auburn street. Asphalt (work done in 1907.)

Engineering furnished by the city	.	.	\$10	50
Final payment to Barber Asphalt Paving Company, under contract for work in 1907	.	.	.	1,685 48

\$1,695 98

Waldeck street, from Melville avenue to Geneva avenue. Length, 1,793 feet. Area, 5,425 square yards. Resurfaced with 2-inch macadam and 4-inch gravel.

Labor furnished by the city	.	.	\$58	50
Teaming furnished by the city	.	.	592	96
Stone furnished by the city	.	.	664	47
Gravel furnished by the city	.	.	407	50
Steam roller furnished by the city	.	.	156	00

\$1,879 43

Walnut avenue, Nos. 179 to 216, Roxbury. Setting edgestones, furnished by owner.

Labor furnished by the city	.	.	.	.
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\$213 88

Walnut Park, Roxbury. Resetting edgestones, 195 feet 8 inches; relaying brick sidewalks, 21 $\frac{2}{3}$ square yards; relaying 10 $\frac{2}{3}$ yards flagging and 105 $\frac{1}{3}$ square yards cobble gutters.

Labor furnished by the city . . .	\$269 63
Gravel furnished by the city . . .	12 80
Sand furnished by the city . . .	2 80

\$285 23

Warren avenue, from City square to railroad, Charlestown. Relaid old paving blocks. Area, 253 square yards. 404 feet edgestone reset.

Labor furnished by the city . . .	\$287 44
Teaming furnished by the city . . .	15 75
Gravel furnished by the city . . .	85 50
Old blocks furnished by the city . . .	65 36

\$454 05

Warren avenue, from Berkeley street to Columbus avenue. Length, 2,250 feet. Area, 12,027 square yards. Resurfacing with 1½-inch macadam.

Labor furnished by the city . . .	\$475 25
Teaming furnished by the city . . .	386 50
Stone furnished by the city . . .	536 68
Steam roller furnished by the city . . .	494 00

\$1,892 43

Warren street, from Pleasant street to Soley street, one side, and from Soley street to Thompson square, one side, Charlestown. Length, 115 feet. Area, 978 square yards. Block paving relaid and 104 square yards brick paving laid. 115 feet new edgestone set.

Labor furnished by the city . . .	\$564 77
Teaming furnished by the city . . .	44 63
Gravel furnished by the city . . .	80 48
Bricks furnished by the city . . .	9 35

\$699 23

Washington street, from Elmore street to West Walnut Park. Length, 1,933 feet, westerly side, and 2,109 feet, easterly side. Area, 4,345 square yards. Repaved gutters in places and resurfaced with 4 to 5 inches macadam.

Labor furnished by the city . . .	\$414 63
Teaming furnished by the city . . .	214 50
Stone furnished by the city . . .	645 91
Stone dust furnished by the city . . .	131 84
Steam roller furnished by the city . . .	253 50
Gravel furnished by the city . . .	10 79

\$1,671 17

Washington street, from Cambridge street to Parsons street, northerly side; from Chestnut Hill avenue to Foster street, southerly side, Brighton. Length, 2,400 feet. Area, 8,000 square yards. Resurfaced with macadam, 1.7 inches average depth.

Labor furnished by the city . . .	\$365 60	
Teaming furnished by the city . . .	85 50	
Stone furnished by the city . . .	447 01	
Steam roller furnished by the city . . .	71 50	
Gravel furnished by the city . . .	151 90	
Bricks furnished by the city . . .	21 45	
		\$1,142 96

Washington street, from Walk Hill street to Tower street, West Roxbury. Length, 800 feet. Area, 2,422 square yards. Resurfaced with 4-inch macadam.

Teaming furnished by the city . . .	\$267 50	
Stone furnished by the city . . .	326 20	
Steam roller furnished by the city . . .	97 50	
Gravel furnished by the city . . .	3 50	
		\$694 70

Washington street, from Ashland street to Beech street, West Roxbury. Length, 5,200 feet. Area, 9,603 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city . . .	\$279 00	
Teaming furnished by the city . . .	880 00	
Watering furnished by the city . . .	134 50	
Stone furnished by the city . . .	1,259 52	
Gravel furnished by the city . . .	152 75	
Lumber furnished by the city . . .	7 57	
Steam roller furnished by the city . . .	403 00	
		\$3,116 34

Wayland street, between Nos. 49 and 61. Length, 186 feet. Area, 62 square yards. Setting new edgestones and paving gutters. Rock excavation for trench. Edgestone furnished by owners.

Labor furnished by the city . . .	\$345 38	
Stone furnished by the city . . .	26 64	
Blocks furnished by the city . . .	45 20	
Gravel furnished by the city . . .	7 50	
		\$424 72

West Canton street, from Appleton street to Shawmut avenue. Length, 1,500 feet. Area, 4,666 square yards. Resurfaced with $1\frac{7}{8}$ -inch macadam.

Labor furnished by the city . . .	\$425 00
Teaming furnished by the city . . .	315 47
Watering furnished by the city .. .	62 25
Stone furnished by the city . . .	563 19
Steam roller furnished by the city . .	286 00

\$1,651 91

West Cottage street, from Brook avenue to Woodville street, Roxbury. Length, 350 feet. Area, 778 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city . . .	\$117 12
Teaming furnished by the city . . .	97 65
Stone furnished by the city . . .	264 84
Steam roller furnished by the city . .	58 50

\$538 11

West Fifth street, from C street to D street. Length, 500 feet. Area, 1,444 square yards. Resurfaced with 6-inch macadam.

Labor furnished by the city . . .	\$391 93
Horse roller furnished by the city . .	70 45
Stone furnished by the city . . .	370 78

\$833 16

Western avenue, from Market street to Telford street. Length, 1,300 feet. Area, 1,444 square yards. Patched with 2-inch macadam.

Stone furnished by the city . . .	\$219 19
Sand furnished by the city . . .	6 60
Gravel furnished by the city . . .	3 10

\$228 89

Worthington street, in front of Normal School. Length, 467 feet. Area, 15.7 square yards brick gutter, and 400 square yards sidewalk; part of street resurfaced to back up gutter. (Work begun in 1907.) Edgestones paid for by Schoolhouse Department.

Labor, including engineering and inspection . .	\$212 37
Teaming	84 75
Stone	48 46
Mack bricks	239 92

Carried forward \$585 50

<i>Brought forward</i>	\$585 50
Edgestone, circular	6 50
Lumber	42 30
Engineering expense	1 35
Amount paid John Donley Company for paving	90 00
Amount paid Charles W. Kinney under contract:	

1,870 cubic yards subgrading (earth excavation) @ 60c.	\$935 00
467 linear feet edgestone set @ 11c., ...	51 37
157 square yards brick gutters laid @ 50c.	78 50
400 square yards brick sidewalks laid @ 35c.	140 00
6 covers reset @ \$3	18 00
400 cubic yards loam furnished and placed @ \$1.45	580 00
Extra work—Cut sheet piling above subgrade:	
7½ days' labor @ \$2	15 00
Plus 15 per cent on \$15	2 25

\$1,820 12

Less amount paid in 1907 450 50

1,369 62

\$2,095 27

Wrentham street, from Bruce street to Adams street. Length, 475 feet. Area, 1,373 square yards. Resurfaced with 2-inch macadam; 447 cubic yards excavation.

Labor furnished by the city	\$268 50
Teaming furnished by the city	162 50
Stone furnished by the city	263 95
Steam roller furnished by the city	156 00

\$850 95

Zeigler street, from Harrison avenue to Washington street. Length, 285 feet. Area, 428 square yards. Resurfaced with 4-inch macadam.

Labor furnished by the city	\$83 38
Stone furnished by the city	108 11
Steam roller furnished by the city	39 00
Watering furnished by the city	10 50

\$240 99

SCHEDULE C.

The following schedule shows the amount charged to the maintenance appropriation of this department for work done on the following streets, the balance of the expense being charged to the appropriation for Street Improvements. The details are shown under Street Improvements:

<i>Beacon street, Raleigh street to St. Mary's street .</i>	\$6,088 30
<i>Church street</i>	2,216 00
<i>Cleveland circle</i>	2,278 51
<i>Dudley street</i>	1,434 33
<i>East Broadway</i>	416 53
<i>Gainsborough street</i>	1,975 02
<i>Humboldt avenue</i>	377 01
<i>Huntington avenue</i>	2,753 56
<i>Kilby street</i>	113 33
<i>Lexington street</i>	146 81
<i>Main street</i>	190 35
<i>Meridian street</i>	4,142 97
<i>Mt. Everett street</i>	170 01
<i>Park square</i>	465 29
<i>Parker street</i>	328 70
<i>Providence street</i>	2,705 07
<i>Rutherford avenue</i>	93 62
<i>Scolley square and Court street.</i>	8,354 04
<i>Stanley street</i>	272 01
<i>Taylor street</i>	1,208 71
<i>Walk Hill street</i>	1,637 58
<i>Walnut avenue</i>	1,158 01
<i>Ward street</i>	206 88
<i>Washington street</i>	2,594 03
<i>Waumbeck street</i>	213 25
	\$41,539 92

OLD COLONY AVENUE, CONSTRUCTION OF.

Work not Finished.

Labor, grading by division force	\$1,875 53
Engineering and inspection	1,625 28
Teaming furnished by the city	273 49
Engineering expense	8 65
Advertising	37 65
Amount paid to Fred S. and A. D. Gore Corporation for constructing macadam roadway between Dorchester avenue and Dorchester street under contract (work uncompleted):	
8,450 cubic yards subgrading, earth excavation, @ 33c.	\$2,788 50
<i>Carried forward</i>	\$2,788 50
	\$3,820 60

<i>Brought forward</i>	\$2,788 50	\$3,820 60
900 cubic yards filling furnished @ \$1	900 00	
325 cubic-yards existing retaining wall taken down @ 75c.	243 75	
325 cubic yards rubble wall built @ \$1.50	487 50	
	\$4,419 75	
Less 15 per cent retained	662 96	
		3,756 79
		<u>\$7,577 39</u>

STREET IMPROVEMENTS.

A street, from Congress street to 175 feet south of Binford street. Repaved with large granite blocks on a concrete base, with pitch and pebble joints, and regulated. Length, 1,620 feet. Area, 6,120 square yards.

Hauling edgestone furnished by the city	\$3 67
Hauling flagging furnished by the city	3 56
Edgestone furnished by the city, 52½ feet @ 70c.	36 75
Flagging furnished by the city, 8 feet North River @ 66c.	5 28
Flagging furnished by the city, 70.9 feet granite @ 80c.	56 60
Bricks furnished by the city, 18,450 at \$11	202 95
Stone (at crusher) furnished by the city, 1,359.65 tons @ \$1.60	2,175 44
Advertising furnished by the city	14 70
Engineering and inspection furnished by the city	594 23
Engineering expense furnished by the city	8 65
Templets furnished by the city	9 37

Gore Corporation:

6,705 square yards, preparing site, @ 29c.	\$1,944 45	
2,811 linear feet existing edgestone reset @ 10c.	281 10	
6,703 square yards concrete base furnished and laid @ 49c., ...	3,284 47	
359 square yards existing granite block paving relaid, gravel joints, @ 35c.	125 65	
6,640 square yards granite block paving furnished and laid, pitch joints, @ \$2.55	16,932 00	
<i>Carried forward</i>	\$22,567 67	\$3,111 20

<i>Brought forward</i>	\$22,567 67	\$3,111 20
66 square yards existing flagging crosswalks relaid, pitch joints, @ 90c.	59 40	
1,918 square yards existing brick sidewalks relaid	479 50	
Extra work — Haul 15,000 second-hand blocks to Lexington street, between Putnam and Prescott streets:		
198 tons old blocks hauled to Lexington street, one mile over-haul, per half mile, per ton, @ 11c.	43 56	
198 tons, ferry tollage per ton @ .0542c.	10 73	
Extra work — Haul paving blocks as directed to the East Eagle street paving yard:		
201 tons paving blocks hauled to East Eagle street paving yard, one and one-half miles over-haul, per half mile, per ton, @ 11c.	66 33	
201 tons, ferry tollage per ton @ .0542c.	10 89	
Extra work — Furnish stone-cutter:		
$\frac{1}{2}$ day, stonecutter	1 75	
Plus 15 per cent on \$1.75	26	
Extra work — Reset manhole cover to grade at Wormwood street:		
$\frac{1}{2}$ day, mason, @ \$5	2 50	
$\frac{1}{2}$ day, tender, @ \$2.25	1 12	
Plus 15 per cent on \$3.62	54	
2 bags cement @ 40c.	80	
150 brick @ \$11 M.	1 65	
	\$23,246 70	
Less 4,325 old granite blocks delivered to contractor @ \$25 M.	108 13	
		23,138 57
		\$26,249 77
Credit: 159,362 second-hand paving blocks @ \$20 M.		3,187 24
		<u>\$23,062 53</u>

Allston street, from Brighton avenue to Commonwealth avenue. Constructed, edgestone set, gutters paved, crushed stone sidewalks laid, roadway resurfaced with macadam. Length, 1,832 feet. Area, 5,292 square yards. 1,169 cubic yards excavation, 3,248 feet edgestone set, 1,144 square yards gutter paved, 84 square yards crossing laid, 2,064 square yards crushed stone sidewalk laid, 4,038 square yards macadam laid. Work done by department force.

Labor, excavation	\$1,628 46
Labor, setting edgestone	394 51
Labor, paving gutters and crosswalks	548 70
Labor, spreading macadam, etc.	534 18
Teaming, excavation	336 28
Teaming, blocks	317 25
Teaming	769 02
Hauling edgestone furnished by the city, ...	163 08
Hauling flagging furnished by the city, ...	24 28
Edgestone, circular, furnished by the city, 39 feet 5 inches @ \$1.30	51 24
Edgestone, straight, furnished by the city, 2,242 feet 10 inches @ 70c.	1,569 97
Edgestone corners, two large, furnished by the city @ \$7	14 00
Flagging, North River, furnished by the city, 326 feet 9 inches @ 66c.	215 67
Paving blocks, second-hand, furnished by the city, 33,000 @ \$20	660 00
Stone furnished by the city, 35.6375 tons @ \$1.10	39 20
Stone furnished by the city, 232.4 tons @ \$1.20	278 88
Stone furnished by the city, 1,093.9375 tons @ \$1.60	1,750 29
Gravel furnished by the city, 25 double loads @ \$1.50	37 50
Gravel furnished by the city, 7½ double loads @ \$1.55	11 63
Gravel furnished by the city, 212¼ double loads @ \$1.35	286 55
Stone dust furnished by the city, 51.9025 tons @ 90c.	46 71
Strippings furnished by the city, 125.34 tons @ 75c.	94 01
Engineering expense furnished by the city	3 70
Steam roller furnished by the city	305 50

\$10,080 61

Ashburton place, from Bowdoin street to a point 50 feet easterly. Area, 118 square yards. Block paving on concrete removed and 10-inch macadam put in place and coated with tarvia A.

Labor furnished by the city . . .	\$59 25
Teaming furnished by the city . . .	36 27
Stone furnished by the city . . .	175 24
Tarvia furnished by the city . . .	22 00
Steam roller furnished by the city . . .	13 00

\$305 76

B street, from West First street to West Third street. Roadway resurfaced with 4-inch macadam. Length, 437 feet. Area, 1,500 square yards.

Labor furnished by the city . . .	\$483 39
Teaming furnished by the city . . .	18 95
Stone furnished by the city . . .	449 17
Horse roller furnished by the city . . .	69 55

\$1,021 06

Batterymarch street, from Milk street to 215 feet easterly. To be asphalted. Work not started.

Advertising	\$15 90
Engineering	30 86

\$46 76

Beacon street, from Raleigh street to St. Mary's street. Roadway resurfaced with 3½-inch macadam. Length, 3,291 feet. Area, 17,852 square yards.

Labor furnished by the city . . .	\$2,085 51
Teaming furnished by the city . . .	1,592 05
Stone furnished by the city, 60.5375 tons @ \$1.35	81 73
Stone furnished by the city, 1,017.2 tons @ \$1.73	1,759 76
Stone furnished by the city, 1,268.97 tons @ \$1.60	2,030 35
Steam roller furnished by the city . . .	988 00

\$8,537 40

Amount charged to appropriation for street improvements . . .	\$2,449 10
Amount charged to appropriation for Street Department	6,088 30

\$8,537 40

Boylston street, from Chestnut avenue to railroad bridge, West Roxbury. Roadway resurfaced with 6-inch macadam. Length, 775 feet. Area, 1,944 square yards.

Labor furnished by the city . . .	\$161 25
Teaming furnished by the city . . .	30 00
Stone furnished by the city . . .	608 74
Steam roller furnished by the city . . .	117 00

\$916 99

Boynton street, from South to Call streets, West Roxbury. Dish gutters laid by George H. Noone, under contract. Length, 850 feet. Area, 742 square yards. Roadway resurfaced with 7-inch macadam by Paving Division. Length, 850 feet. Area, 1,889 square yards.

Labor furnished by the city	\$294 25
Teaming furnished by the city	358 00
Blocks furnished by the city	3 00
Lumber furnished by the city	37
Stone furnished by the city	709 98
Steam roller furnished by the city	130 00

Amount paid to George H. Noone, under contract:

742 square yards preparing site @	
50c.	\$371 00
742 square yards cobblestones	
hailed and laid @ 80c	593 60

964 60

\$2,460 20

Bromfield street, from Tremont to Washington streets. Repaved with new large granite blocks on concrete base, with pitch joints and regulated. Length, 515 feet. Area, 1,257 square yards.

Engineering and inspection furnished by the city	\$216 72
Teaming furnished by the city	2 56
Bricks, 1,700 @ \$11 per M., furnished by the city, ...	18 70
Edgestone, 1 large corner furnished by the city ¹	7 00
Stone, 269.95 tons @ \$1.60, furnished by the city	431 92
Advertising furnished by the city	14 56
Engineering expense furnished by the city	1 05
Templets furnished by the city	3 57

Carried forward \$696 08

<i>Brought forward</i>		\$696 08
Amount paid John I. Fitzgerald under contract:		
1,303 square yards preparing site		
@ 27c.	\$351 81	
175 linear feet existing edgestone		
reset @ 11c.	19 25	
1,303 square yards concrete base		
furnished and laid @ 50c.	651 50	
1,281 square yards granite block		
paving, pitch joints, fur-		
nished and laid @ \$2.50	3,202 50	
20 square yards flagging cross-		
walks, pitch joints, furnished		
and laid @ \$4.41	88 20	
66 square yards existing brick		
sidewalks relaid @ 25c.	16 50	
Extra work — Relay exist-		
ing granite flagging at Prov-		
ince street, with pitch joints:		
4 square yards granite flag-		
ging relaid @ 90c.	3 60	
		4,333 36
		\$5,029 44
Credit: Paving blocks, 43,995 @ \$20 per M.		879 90
		\$4,149 54
<i>Bunker Hill street</i> , from Main to Sackville streets.		
Resurfaced with 4-inch macadam. Length,		
1,900 feet. Area, 4,140 square yards.		
Labor furnished by the city	\$272 25	
Teaming furnished by the city	178 63	
Stone furnished by the city	618 70	
Gravel furnished by the city	150 75	
Steam roller furnished by the city	312 00	
		\$1,532 33
<i>C street</i> , from West Fifth to and across West Sixth		
streets. Repaved and regulated. (Work		
done in 1907.) Length, 485 feet. Area,		
1,161 square yards.		
Final payment to Suffolk Contracting Company,		\$51 78
<i>C street</i> , from First to Second streets. Roadway		
resurfaced with 6-inch macadam. Length,		
219 feet. Area, 694 square yards.		
Labor furnished by the city	\$236 13	
Stone furnished by the city	255 43	
Teaming furnished by the city	5 25	
Horse roller furnished by the city	53 50	
		\$550 31

Canterbury street, from Angell street to Blue Hill avenue. Length, 725 feet. Area, 4,200 square yards 4-inch macadam. 688 cubic yards excavated and deposited in fill on street; 114 feet edgestone reset and 55 square yards gutters repaved. Excavated and widened.

Labor furnished by the city . . .	\$1,280 59	
Teaming furnished by the city . . .	481 75	
Blocks furnished by the city . . .	30 00	
Stone furnished by the city . . .	1,697 65	
Steam roller furnished by the city . . .	321 00	
		\$3,810 99

Centre street, from Church to La Grange streets. Resurfaced with 4-inch macadam. Length, 1,350 feet. Area, 6,000 square yards.

Labor furnished by the city . . .	\$620 76	
Teaming furnished by the city . . .	1,002 00	
Lumber furnished by the city . . .	5 00	
Stone furnished by the city . . .	1,628 18	
Gravel furnished by the city . . .	104 30	
Steam roller furnished by the city . . .	429 00	
		\$3,789 24

Chandler street, from Berkeley street to Columbus avenue. Resurfaced with 3-inch macadam taken from Gerard street. Length, 1,569 feet. Area, 4,699 square yards.

Labor furnished by the city . . .	\$205 50	
Teaming furnished by the city . . .	86 85	
Stone furnished by the city . . .	45 12	
Steam roller furnished by the city . . .	123 50	
		\$460 97

Chelsea street, from 40 feet south of Scott's court to Chelsea bridge south. Roadway regulated and paved to grade with the old blocks. Length, 393 feet. Area, 1,770 square yards, not including track and dummy.

Labor furnished by the city	\$148 00
Teaming furnished by the city	47 12
Advertising furnished by the city	13 85
Engineering expense furnished by the city	1 75
Amount paid to Cornelius J. Duggan, under contract:	

438 linear feet edgestone reset @

6c. \$26 28

1,791 square yards granite block

paving relaid @ 35c. 626 85

<i>Carried forward</i>	\$653 13	\$210 72
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<i>Brought forward</i>	\$653 13	\$210 72
15 square yards flagging cross-		
walks relaid @ 25c.	3 75	
360 square yards brick sidewalks		
relaid @ 12c.	43 20	
		700 08

\$910 80

Church street, from Boylston to Providence streets.

Wood blocks on concrete base, and regulated.

Length, 150.1 feet. Area, 532 square yards
(includes 88 square yards track area).

Engineering and inspection furnished by the city	\$68 87
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Edgestone furnished by the city, 10 feet 7 inches, @ 70c.	7 41
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Edgestone furnished by the city, 2 large corners, @ \$7	14 00
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Bricks furnished by the city, 2,000, @ \$11	22 00
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Engineering expense furnished by the city	75
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Templets furnished by the city	4 48
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Amount paid United States Wood Preserving Company, under contract:

444 square yards preparing site @ 50c.	\$222 00
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226 linear feet edgestone set @ 21c.	47 46
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444 square yards concrete base laid @ \$1	444 00
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444 square yards wood block pavement furnished and laid @ \$3.25	1,443 00
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143 square yards brick sidewalks laid @ 35c.	50 05
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Extra work — Furnish stone-cutter to dress existing edgestone. 15 hours, stonecutter, @ 55c.	8 25
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Plus 15 per cent on \$8.25	1 24
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2,216 00

\$2,333 51

Credit: 9,320 old granite blocks @ \$20 per M.,	186 40
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\$2,147 11

Amount charged to the appropriation

for street improvements	\$117 51
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Amount charged to the appropriation

for Street Department	2,216 00
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\$2,333 51

Less credit for old paving blocks	186 40
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2,147 11

Clarendon street, from Boylston street to the railroad. Resurfaced with 2-inch macadam and coated with terracolio. Length, 553 feet. Area, 1,693 square yards.

Labor furnished by the city . . .	\$246 13
Teaming furnished by the city . . .	105 85
Terracolio furnished by the city . . .	17 05
Stone furnished by the city . . .	264 57
Steam roller furnished by the city . . .	110 50

\$744 10

Cleveland circle, from Beacon street to Chestnut Hill avenue. Resurfaced with 6.4-inch macadam. Length, 800 feet. Area, 4,266 square yards.

Labor furnished by the city . . .	\$701 81
Teaming furnished by the city . . .	436 07
Blocks furnished by the city . . .	5 25
Stone furnished by the city . . .	1,648 35
Sand furnished by the city . . .	23 10
Gravel furnished by the city . . .	14 33
Engineering expense furnished by the city . . .	30
Steam roller furnished by the city . . .	305 50
Drop inlet built by Sewer Division . . .	234 77

\$3,369 48

Amount charged to the appropriation for street improvements . . .	\$1,090 97
Amount charged to the appropriation for Street Department . . .	2,278 51

3,369 48

Cohasset street, from Corinth to Albano street. Edgestone set. Gutters paved and roadway surfaced with 6-inch macadam. Crushed stone sidewalks built. Area, 1,900 square yards macadam, 568 cubic yards excavation. 1,968 feet edgestone set and reset, 826 square yards block paving, 1,104 square yards crushed stone sidewalk.

Labor furnished by the city, excavation . . .	\$724 20
Labor paving gutters . . .	330 40
Labor setting edgestone . . .	295 20
Labor laying brick sidewalks . . .	5 75
Labor spreading macadam, etc. . .	380 00
Labor spreading crushed stone sidewalks . . .	165 60

Carried forward . . . \$1,901 15

<i>Brought forward</i>	\$1,901 15
Teaming furnished by the city, excavation	252 50
Teaming furnished by the city, hauling blocks	191 50
Water cart furnished by the city	132 00
Hauling edgestone furnished by the city	110 61
Flagging, granite, furnished by the city, 14 feet 4 inches @ 80c.	11 46
Flagging, North River, furnished by the city, 13 feet 6 inches @ 66c.	8 91
Bricks, 300, furnished by the city, @ \$11	3 30
Blocks, 21,200, furnished by the city, @ \$20	424 00
Lumber, 5 cedar posts, furnished by the city, @ 35c.	1 75
Lumber, 155 feet spruce, furnished by the city, @ \$25	3 88
Stone, 642.055 tons, furnished by the city, @ \$1.35	866 77
Gravel, 248½ double loads, furnished by the city, @ \$1.40	347 90
Cement, 1¾ barrels, furnished by the city, @ \$1.85	3 23
Cement, 2½ barrels, furnished by the city, @ \$1.75	4 37
Edgestone, 23 corners, furnished by the city, @ \$3.60	82 80
Edgestone, circular, furnished by the city, 17 feet 5 inches @ \$1.30	22 63
Edgestone, straight, furnished by the city, 1,654 feet 8 inches @ 70c.	1,158 25
Steam roller furnished by the city	169 00

\$5,696 01

Congress street, from State street to Water street.
To be paved with wood blocks on a concrete base. Work not started.

Engineering	\$40 10
Advertising	13 25

\$53 35

Cooper street, from Washington Street North to and across Endicott street. Length, 238.7 feet. Area, 726 square yards. Asphalted and regulated.

Hauling edgestone and flagging	\$9 31
Edgestone furnished by the city	50 70

Carried forward \$60 01

<i>Brought forward</i>	\$60 01	
Flagging furnished by the city . . .	57 19	
Bricks furnished by the city, 6,000 @ \$11 per M.	66 00	
Blocks furnished by the city, 400 No. 1 @ \$70	28 00	
Engineering and inspection furnished by the city	79 37	
Amount paid Barber Asphalt Paving Company under contract:		
350 feet edgestone set @ 21c.	\$73 50	
16 square y a r d s granite block paving laid, gravel joints, @ 50c.	8 00	
14 square y a r d s granite block paving laid, pitch joints, @ \$1.05	14 70	
31 square y a r d s flagging cross- walk laid, pitch joints, @ \$1.05	32 55	
695 square y a r d s bituminous concrete binder and asphalt wearing surface furnished and laid @ \$2.50	1,737 50	
1 cubic yard extra bituminous binder fur- nished and laid	9 00	
72 cubic y a r d s cement con- crete base laid @ \$5	360 00	
212 square y a r d s brick side- walks laid @ 35c.	74 20	
<i>Carried forward</i>	\$2,309 45	\$290 57

<i>Brought forward</i> .	\$2,309 45	\$290 57	
Extra work—Ex- c a v a t e and haul surplus material over sewer trench to R e v e r e Street Yard:			
437 square y a r d s surplus ma- terial exca- v a t e d and hailed @ 50c. .	218 50		
		2,527 95	
		<u>\$2,818 52</u>	
Credit: 5,391 old paving blocks @ \$20 per M.		107 82	
		<u>\$2,710 70</u>	
<i>Corning street</i> , from Washington street to Shaw- mut avenue. Roadway asphalted and regu- lated. Length, 338 feet. Area, 734 square yards.			
Teaming furnished by the city . . .	\$8 75		
Bricks furnished by the city, 6,000 @ \$11 M.	66 00		
Engineering and inspection furnished by the city	186 48		
Engineering expense furnished by the city	2 45		
Advertising furnished by the city .	14 25		
Amount paid Warren Brothers Com- pany under contract:			
664 linear feet edge- s t o n e set @ 20c.	\$132 80		
48.43 cubic y a r d s concrete base laid @ \$6	290 58		
36 square y a r d s granite block paving laid, gravel joints, @ 50c	18 00		
17 square y a r d s granite block paving laid, pitch joints, @ 75c.	12 75		
<i>Carried forward</i> . . .	\$454 13	\$277 93	

<i>Brought forward</i> . . .	\$454 13	\$277 93	
35 square yards flagging cross- walks laid, gravel joints, @ 50c. . .	17 50.		
700 square yards bituminous concrete binder and asphalt wear- ing surface furnished and laid @ \$1.84 . . .	1,288 00		
389 square yards brick side- walks laid @ 25c. . .	97 25		
Extra work— Cut out con- crete base where neces- sary on ac- count of the resetting of edgestones:			
64½ hours labor @ 25c. . . .	16 13		
Plus 15 per cent on \$16.13 . . .	2 42		
		1,875 43	
		<u>\$2,153 36</u>	
Credit: 240 old paving blocks @ \$20 per M.		4 80	
		<u>\$2,148 56</u>	
<i>D street</i> , from Gold street to West Broadway. Repaved and regulated. Length, 412 feet. Area, 1,740 square yards.			
Inspection furnished by the city . . .	\$63 50		
Hauling flagging furnished by the city, . . .	14 10		
Flagging furnished by the city . . .	84 92		
Bricks furnished by the city . . .	143 00		
Amount paid William Higgins under contract:			
788 linear feet edge- stones set @ 21c. . . .	\$165 48		
<i>Carried forward</i> . . .	\$165 48	\$305 52	

<i>Brought forward</i> . .	\$165 48	\$305 52
1,740 square yards granite block paving laid @ 65c. . .	1,131 00	
671 square yards brick side - walks laid @ 35c. . .	234 85	
		1,531 33

\$1,836 85

Dorchester avenue, from Ashmont to Codman street. Work started and suspended.

Labor furnished by the city . .	\$5 63
Teaming furnished by the city . .	2 50
Steam roller furnished by the city . .	13 00

\$21 13

Dudley street, from Washington street to Eliot square and part of Eliot square. Resurfaced with 3-inch macadam. Length, 1,360 feet. Area, 1,388 square yards, north side. Length, 1,563 feet. Area, 3,505 square yards, south side.

Labor furnished by the city . .	\$387 15
Teaming furnished by the city . .	112 07
Hauling flagging furnished by the city, . .	26 06
Flagging furnished by the city . .	16 94
Crossing blocks furnished by the city, . .	1 50
Stone furnished by the city . .	843 91
Gravel furnished by the city . .	8 80
Steam roller furnished by the city . .	221 00

\$1,617 43

Amount charged to appropriation for street improvements	\$183 10
Amount charged to appropriation for Street Department	1,434 33

1,617 43

East Broadway, from P to Q street. Resurfaced with 8-inch macadam. Length, 503 feet. Area, 2,347 square yards.

Labor furnished by the city . .	\$520 03
Stone furnished by the city . .	1,033 76
Gravel furnished by the city . .	37 50
Horse roller furnished by the city . .	108 35

\$1,699 64

Amount charged to appropriation for street improvements	\$1,283 11
Amount charged to appropriation for Street Department	416 53

\$1,699 64

Eliot street, from Pleasant to Tremont street.
Repaved with large blocks on a concrete base
with pitch joints and regulated. Length, 717
feet. Area, 2,908 square yards.

Engineering and inspection	\$359 01
Edgestone furnished by the city, 23 feet 2 inches @ 70c.	16 22
Flagging furnished by the city, 495 feet 5 inches @ 80c.	396 33
Bricks furnished by the city, 20,000 @ \$11 per M.	220 00
Stone furnished by the city, 200.5 tons @ \$1.60,	320 08
Advertising furnished by the city	13 00
Engineering expenses furnished by the city .	6 50
Templets furnished by the city	3 55
Amount paid to John I. Fitzgerald under con- tract:	

2,109 square yards, preparing site, @ 30c.	\$632 70
1,211 linear feet edgestone set @ 13c.	157 43
1,241 square yards concrete base furnished and laid @ 55c. . . .	682 55
46 square yards existing granite block paving relaid, gravel joints, @ 37c.	17 02
2,010 square yards granite block paving furnished and laid, pitch joints, @ \$2.57	5,165 70
1 square yard existing granite block paving relaid, pitch joints	80
99 square yards flagging cross- walks hauled and laid, pitch joints, @ \$1	99 00
871 square yards brick sidewalks laid @ 25c.	217 75

6,972 95

\$8,307 64

Credit: 46,669 old blocks @ \$20 per M. .

933 38

\$7,374 26

Fuller street, from Dorchester avenue to Washington street. Gravel roadway graded. Length, 1,850 feet. Area, 4,713 square yards.

Labor furnished by the city	. . .	\$264 38
Teaming furnished by the city	. . .	117 25
Steam roller furnished by the city	. . .	234 00

\$615 63

Gainsborough street, from Hemenway street to Huntington avenue. Resurfaced with macadam, average depth 6.7 inches. Length, 1,038 feet. Area, 3,269 square yards. Artificial stone sidewalks repaired. Length, 715 feet. Area, 5,219 square yards, St. Stephen to Hemenway streets.

Labor furnished by the city		\$740 75
Teaming furnished by the city		346 45
Lumber furnished by the city		76
Stone furnished by the city		1,115 13
Gravel furnished by the city		9 42
Advertising furnished by the city		12 75
Engineering expenses furnished by the city		1 10
Steam roller furnished by the city		258 00

Amount paid Robert Eagar, Jr., under contract:

5,219 square feet artificial stone sidewalks laid @ 13½c.		\$704 57
733 linear feet edgestones set @ 7c.,	51 31	
258 square yards granite block paving and flagging crosswalks relaid @ 25c.		64 50
Extra work—Reset catch-basin cover to grade		3 00

823 38

\$3,307 74

Amount charged to appropriation for street improvements		\$1,332 72
Amount charged to appropriation for Street Department		1,975 02

\$3,307 74

Gerard street, from Massachusetts avenue to Kemble street. Excavated macadam and paved roadway with old paving blocks. Edgestones set 407 feet. 4,060 cubic yards roadway excavated; cutting averaged 2⁹/₁₀ feet on roadway and 1½ feet on sidewalk; 3,860 square yards paving laid and 50 square yards brick paving laid.

Labor furnished by the city, excavation		\$3,102 20
Carried forward		\$3,102 20

<i>Brought forward</i>	\$3,102 20
Labor furnished by the city paving, 1,055	08
Teaming blocks furnished by the city, 243	40
Teaming excavation	951 85
Edgestone furnished by the city, 2	
small corners @ \$3.60	7 20
Flagging furnished by the city, 41	
feet North River @ 66c.	27 06
Blocks furnished by the city, 97,224	
old blocks @ \$20	1,944 48
Sand furnished by the city, 13 tons	
beach @ 75c.	9 75
Gravel furnished by the city, 191 tons	
beach @ 75c.	143 25
Gravel furnished by the city, 428	
double loads @ \$1.60	684 80
Cement furnished by the city, $\frac{1}{4}$ bar-	
rel @ \$1.75	44
Steam roller furnished by the city . .	97 50

\$8,267 01

Harvard avenue, from Commonwealth avenue to Brighton avenue. Resurfaced with 2-inch macadam. Length, 871 feet. Area, 2,000 square yards.

Labor furnished by the city . . .	\$102 87
Teaming furnished by the city . .	35 00
Stone furnished by the city . . .	205 56
Gravel furnished by the city . . .	41 08
Steam roller furnished by the city .	58 50

\$443 01

Humboldt avenue, from Walnut avenue to Seaver street. Resurfaced with 5-inch macadam and gutters repaved. Length, 3,485 feet. Area, 3,998 square yards, easterly side. Length, 3,383 feet. Area, 3,593 square yards, westerly side.

Labor furnished by the city . . .	\$1,899 14
Teaming furnished by the city . .	445 73
Brick furnished by the city . . .	3 58
Stone furnished by the city . . .	1,987 94
Gravel furnished by the city . . .	52 80
Sand furnished by the city . . .	12 60
Steam roller furnished by the city .	455 00

\$4,856 79

Amount charged to the appropriation for Street Department	\$377 01
Amount charged to the appropriation for street improvements	4,479 78

4,856 79

Huntington avenue, from Tremont street to Brookline line; resurfaced with 3-inch macadam, north side; from Gainsborough street to Tremont street, southerly side, and from Parker street to Brookline line, southerly side. Resurfaced with 3-inch macadam. Area, about 26,000 square yards.

Labor furnished by the city . . .	\$2,553 87
Teaming furnished by the city . . .	973 70
Watering furnished by the city . . .	145 80
Lumber furnished by the city . . .	1 29
Stone furnished by the city . . .	4,457 41
Sand furnished by the city . . .	3 92
Steam roller furnished by the city . .	1,120 00

\$9,255 99

Amount charged to the appropriation for Street Department . . .	\$2,753 56
Amount charged to the appropriation for street improvements . . .	6,502 43

9,255 99

Irvington street, from Huntington avenue to railroad. Resurfaced with 4-inch macadam. Length, 400 feet. Area, 1,333 square yards.

Labor furnished by the city . . .	\$236 64
Teaming furnished by the city . . .	180 57
Stone furnished by the city . . .	285 57
Sand furnished by the city . . .	1 55
Gravel furnished by the city . . .	18 84
Steam roller furnished by the city . .	78 50

\$801 67

Kilby street, from Milk street to Central street. Asphalted. Length, 390 feet. Area, 1,540 square yards.

Engineering and inspection furnished by the city	\$264 73
Advertising furnished by the city	15 10
Amount paid Jones & Meehan for excavating and removing surplus material	36 00
Amount paid Jones & Meehan, under contract:	
18 square yards granite block paving laid, pitch joints, @ \$1	\$18 00
15 square yards flagging cross- walks laid, pitch joints, @ \$1	15 00

Carried forward \$33 00

\$315 83

<i>Brought forward</i>	\$33 00	\$315 83
1,540 square yards bituminous concrete binder and asphalt wearing surface furnished and laid @ \$1.90	2,926 00	
12 cubic yards extra bituminous binder furnished and laid @ \$8	96 00	
60 cubic yards extra cement concrete base furnished and laid @ \$6	360 00	
Extra work — Lower catch-basin and reset edgestone and relay brick sidewalk at catch-basin:		
$\frac{1}{2}$ day, paver, @ \$5	2 50	
$\frac{1}{2}$ day, rammer, @ \$2.50	1 25	
3 hours labor @ 25c.	75	
5 hours, tender, @ $28\frac{1}{8}$ c.	1 41	
Plus 17 per cent on \$5.91	89	
50 paving brick @ \$12	60	
3 bags cement @ 50c.	1 50	
		3,423 90 •
		\$3,739 73
Amount charged to appropriation for Street Department	\$113 33	
Amount charged to appropriation for street improvements	3,626 40	
		3,739 73
<i>Kneeland street</i> , from Washington street to Harrison avenue. Paved with large blocks on concrete base, with pitch joints and regulated. Length, 382 feet. Area, 1,443 square yards.		
Engineering and inspection		\$338 60
Edgestone furnished by the city, 2 feet 10 inches, circular, @ \$1.30		3 69
Edgestone furnished by the city, 4 feet $3\frac{1}{2}$ inches, circular, @ \$1.20		5 15
Edgestone furnished by the city, 18 feet 7 inches, straight, @ 70c.		13 00
Flagging furnished by the city, 204 feet 3 inches @ 80c.		163 40
Bricks furnished by the city, 4,000 @ \$11		44 00
Stone furnished by the city, 210.05 tons @ \$1.60		336 08
<i>Carried forward</i>		\$903 92

<i>Brought forward</i>	\$903 92
Advertising furnished by the city	15 90
Engineering expense furnished by the city	2 45
Templets furnished by the city	4 37
Amount paid John Donley Company under contract:	
1,146 square yards, preparing site, @ 34c.	\$389 64
341 linear feet edgestones set @ 8c.	27 28
1,124 square yards concrete base furnished and laid @ 53½c.,	601 34
1,066 square yards granite block paving furnished and laid, pitch joints, @ \$2.56	2,728 96
27 square yards existing granite block paving relaid @ 50c.,	13 50
42 square yards flagging cross- walks hauled and laid, pitch joints, @ 75c.	31 50
11 square yards existing flagging crosswalks relaid @ 40c.	4 40
239 square yards brick sidewalks laid @ 42c.	100 38
	\$3,897 00
Less wharfage on 16,500 paving blocks delivered on Hecht's Wharf @ \$2 per M.	33 00
	\$3,864 00
	\$4,790 64
Credit: 36,392 paving blocks @ \$20 per M.	727 84
	<u>\$4,062 80</u>
<i>Lawn street</i> , from Heath street to Heath street. Roadway excavated and macadamized with 6-inch crushed stone. New edgestone set, gutters paved and crushed stone sidewalks built. Length, 1,470 feet. Area, 3,267 square yards. Work done by department force.	
Labor furnished by the city, excavation and inspection	\$1,046 53
Labor furnished by the city, spreading mac- adam, etc.	471 35
<i>Carried forward</i>	\$1,517 88

<i>Brought forward</i>	\$1,517 88
Labor furnished by the city, spreading stone on sidewalks	88 75
Teaming furnished by the city, excavation	170 24
Teaming furnished by the city, macadam	73 71
Teaming furnished by the city, hauling blocks, ...	84 49
Water cart furnished by the city	58 24
Hauling edgestone furnished by the city	180 64
Edgestone furnished by the city:	
54 feet 10 inches, circular edge,	
@ \$1.20	\$65 80
2 small corners @ \$3.60	7 20
2,588 feet 6½ inches @ \$70	1,811 98
	1,884 98
Bricks furnished by the city, 600 @ \$11	6 60
Blocks furnished by the city, 31,515 @ \$20	630 30
Lumber furnished by the city	15 69
Stone furnished by the city, 119.225 tons @ \$1.60, 1,112.875 tons @ \$1.35	1,693 14
Gravel furnished by the city	4 80
Engineering expense furnished by the city	3 20
Steam roller furnished by the city	256 75
Amount paid Trimount Contracting Company under contract:	
526 cubic yards subgrading (earth excavation) @ 75c.	\$394 50
2 cubic yards subgrading (rock excavation) @ \$1.75	3 50
2,870 linear feet edgestones set @ 21c.	602 70
1,007 square yards granite block paving laid @ 50c.	503 50
45 square yards brick sidewalks laid @ 40c.	18 00
Extra work—Furnish stone-cutter to cut edgestone for driveway:	
5 hours, stonecutter, @ 62½c.	3 13
Plus 15 per cent on \$3.13	47
	1,525 80
	<u>\$8,195 21</u>

Lexington street, from Putnam street to 250 feet beyond Prescott street. Excavated and removed macadam 1 foot deep. Paved with second-hand blocks on a gravel base. Length, 860 feet. Area, 1,916 square yards.

Labor furnished by the city, excavating	\$450 63
Labor furnished by the city, paving	400 40
<i>Carried forward</i>	\$851 03

<i>Brought forward</i>	\$851 03	
Teaming furnished by the city, excavation	330 77	
Teaming furnished by the city, blocks, etc.	184 73	
Edgestone furnished by the city	6 30	
Flagging furnished by the city	30 36	
Blocks furnished by the city, 425 @ \$70, 36,986 @ \$20	769 47	
Gravel furnished by the city, 40 tons @ 78c., 214 tons @ 75c., 71 loads @ \$1.36	288 26	
Steam roller furnished by the city	48 75	
		\$2,509 67
Amount charged to appropriation for Street Department	\$146 81	
Amount charged to appropriation for street improvements	2,362 86	
		<u>2,509 67</u>
<i>Main street, from Beach street to Alford street, Repaved with old granite blocks. Length, 750 feet. Area, 68 square yards sidewalk paving and 1,446 square yards block paving; 63 feet edgestones reset.</i>		
Labor furnished by the city	\$688 39	
Teaming furnished by the city	58 50	
Bricks furnished by the city, 1,740 @ \$11	19 14	
Lumber furnished by the city, 70 feet spruce @ \$24	1 68	
Sand furnished by the city, 3 double loads @ \$1.20	3 60	
Gravel furnished by the city, 105 double loads @ \$1.50	157 50	
		\$928 81
Amount charged to appropriation for Street Department	\$190 35	
Amount charged to appropriation for street improvements	738 46	
		<u>928 81</u>
<i>Massachusetts avenue, from Magazine street to Gerard street and from Shirley street to Magazine street, on the southerly side. Resurfaced with 6-inch macadam taken from Gerard street. Length, 2,205 feet. Area, 4,993 square yards.</i>		
Labor furnished by the city	\$432 75	
Teaming furnished by the city	429 03	
<i>Carried forward</i>		\$861 78

<i>Brought forward</i>	\$861 78
Gravel furnished by the city, 46½ tons, beach, @ 75c.	34 88
Steam roller furnished by the city	305 50

\$1,202 16

Meridian street, from Maverick square to Central square, repaved with new large granite blocks, edgestones reset, sidewalks and crosswalks relaid. 1,090 feet edgestone reset; 1,815 square yards excavation; 1,136 square yards brick paving; 2,502 square yards block paving.

Labor furnished by the city, excavation	\$711 23
Labor furnished by the city, setting edgestone	128 04
Labor furnished by the city, relaying bricks	169 01
Labor furnished by the city, relaying paving and crossings	771 83
Teaming furnished by the city, excavation	325 10
Teaming furnished by the city, edgestone	14 94
Teaming furnished by the city, brick paving	27 00
Teaming furnished by the city, block paving and crossings	171 61
Edgestone furnished by the city, 54 feet, circular, @ \$1.20	64 80
Edgestone furnished by the city, 62 feet 9 inches, straight, @ 70c.	43 91
Flagging furnished by the city, 25 feet, North River, @ 66c.	16 50
Flagging furnished by the city, 271 feet 9 inches, North River, old, @ 33c.	89 67
Bricks furnished by the city, 23,540 @ \$11 per M.	258 94
Blocks furnished by the city, 30 old @ \$20 per M.	60
Blocks furnished by the city, 64,734 @ \$64 per M.	4,142 97
Lumber furnished by the city, 90 feet spruce @ \$25 per M.	2 25
Stone furnished by the city, 3½ tons @ \$1.40	4 90
<i>Carried forward</i>	\$6,943 30

<i>Brought forward</i>	\$6,943 30	
Sand furnished by the city, 31 tons @ \$1	31 00	
Sand furnished by the city, 5 single loads @ 68c.	3 40	
Sand furnished by the city, 3½ double loads @ \$1	3 50	
Sand furnished by the city, 6 double loads @ \$1.36	8 16	
Gravel furnished by the city, 15 single loads @ 68c.	10 20	
Gravel furnished by the city, 18 single loads @ 75c.	13 50	
Gravel furnished by the city, 16 tons @ 75c.	12 00	
Gravel furnished by the city, 165 double loads @ \$1.36	224 40	
Cement furnished by the city, 3 bags @ 44c.	1 32	
	\$7,250 78	
Credit: 825 old blocks @ \$20 per M	16 50	
		\$7,234 28
Amount charged to appropriation for Street Department	\$4,142 97	
Amount charged to appropriation for street improvements	3,091 31	
		<u>7,234 28</u>
 <i>Middle street</i> , from Dorchester street to Dorchester avenue. Resurfaced with 4-inch macadam. Length, 857 feet. Area, 1,333 square yards.		
Labor furnished by the city	\$389 13	
Teaming furnished by the city	6 70	
Horse roller furnished by the city	37 45	
Stone furnished by the city	289 86	
		<u>\$723 14</u>
 <i>Mt. Everett street</i> , from Quincy street to Hamilton street. Patched with macadam.		
Labor furnished by the city	\$108 01	
Teaming furnished by the city	136 13	
Stone furnished by the city	31 89	
Gravel furnished by the city	13 75	
Steam roller furnished by the city	45 50	
		\$335 28
Amount charged to appropriation for Street Department	\$170 01	
Amount charged to appropriation for street improvement	165 27	
		<u>335 28</u>

Neponset avenue, from Adams to Ashmont street.

Resurfaced with 3-inch macadam (work unfinished). Length, 3,368 feet. Area, 3,650 square yards.

Labor furnished by the city . . .	\$196 25
Teaming furnished by the city . . .	130 75
Stone furnished by the city . . .	386 88
Steam roller furnished by the city . . .	123 50

\$837 38

New Heath street, from Centre to Parker streets.

Resurfaced with 5-inch macadam. Length, 563 feet. Area, 1,820 square yards.

Labor furnished by the city . . .	\$460 88
Teaming furnished by the city . . .	59 08
Blocks furnished by the city . . .	5 00
Stone furnished by the city . . .	762 12
Gravel furnished by the city . . .	2 40
Steam roller furnished by the city . . .	143 00

\$1,432 48

Oak square, at the intersection of Washington, Faneuil and Bigelow streets. Resurfaced with macadam 6 inches deep. Length, 906 feet. Area, 2,872 square yards.

Labor furnished by the city . . .	\$425 94
Teaming furnished by the city . . .	380 98
Stone furnished by the city . . .	1,056 93
Gravel furnished by the city . . .	54 00
Steam roller furnished by the city . . .	214 50

\$2,132 35

Park square, from Boylston to Eliot streets. Wood block pavement (work done in 1907).

Engineering furnished by the city . . . \$23. 00

Amount paid United States Wood Preserving Company, under contract:

4,792 square yards, preparing site, @ 50c.	\$2,396 00
820 linear feet edgestone set @ 21c.	172 20
4,792 square yards concrete base laid @ \$1	4,792 00
98 square yards granite block paving laid, gravel joints, @ 65c.	63 70
37 square yards granite block paving laid, pitch joints, @ \$1.20	44 40

Carried forward \$7,468 30

\$23 00

<i>Brought forward</i>	\$7,468 30	\$23 00
55 square yards flagging cross-walks laid, pitch joints, @ \$1.20	66 00	
4,713 square yards wood block pavement laid @ \$3.25	15,317 25	
819 square yards brick sidewalks laid @ 35c.	286 65	
	\$23,138 20	
Less 5,052 old granite blocks delivered to contractor @ \$25, ...	126 30	
	\$23,011 90	
Less amount paid in 1907	18,027 56	
		4,984 34
		\$5,007 34
Amount charged appropriation for Street Department	\$465 29	
Amount charged appropriation for street improvements	4,542 05	
		5,007 34
<i>Parker street, from Fisher avenue to Heath street.</i>		
Resurfaced with 4½-inch macadam. Length, 359 feet. Area, 1,543 square yards.		
Labor furnished by the city	\$295 50	
Teaming furnished by the city	52 85	
Bricks furnished by the city	3 30	
Blocks furnished by the city	1 00	
Stone furnished by the city	316 19	
Sand furnished by the city	1 40	
Steam roller furnished by the city	65 00	
		\$735 24
Amount charged appropriation for Street Department	\$328 70	
Amount charged appropriation for street improvements	406 54	
		735 24
<i>Providence street, from west side of Church street to 170 feet easterly. Wood blocks on concrete base and regulating. Length, 173 feet. Area, 448 square yards; track area 83 square yards extra.</i>		
Engineering and inspection	\$151 62	
Teaming furnished by the city	2 25	
<i>Carried forward</i>	\$153 87	

<i>Brought forward</i>	\$153 87
Flagging furnished by the city, 16½ feet @ 80c.	13 20
Bricks furnished by the city, 6,400 @ \$11	70 40
Engineering expenses furnished by the city	1 15
Amount paid United States Wood Preserving Company, under contract:	

447 square yards, preparing site, @ 50c.	223 50
530 linear feet edgestone set @ 21c.	111 30
447 square yards concrete base laid @ \$1	447 00
373 square yards granite block paving laid, gravel joints, @ 65c.	242 45
4 square yards granite block paving laid, pitch joints, @ \$1.05	4 20
12 square yards flagging crosswalks laid, pitch joints, @ \$1.05	12 60
431 square yards wood block pavement furnished and laid @ \$3.25	1,400 75
441 square yards brick sidewalks laid @ 35c.	154 35
Extra work—Dress old flagging and lay same in sidewalk in place of brick where directed:	

1½ days, foreman, @ \$3.20	5 20
28½ hours, paver, @ 50c.	14 25
8½ days, stonecutter, @ \$4.40	37 40
12¾ days labor @ \$2	24 75
Plus 15 per cent on \$81.60	12 24
5 barrels Portland cement @ \$1.80	9 00
152 cubic feet sand @ 4c.	6 08

	\$2,943 69	
Credit: 12,835 old blocks @ \$20	256 70	
		\$2,686 99
Amount charged to appropriation for Street Department	\$2,705 07	
<i>Carried forward</i>	\$2,705 07	

<i>Brought forward</i>	\$2,705 07	
Amount charged to appropriation for street improvements	238 62	
	\$2,943 69	
Less for 12,835 old paving blocks	256 70	
		<u>\$2,686 99</u>
<i>Rutherford avenue</i> , from Baldwin street to Thorn- dike street. Repaved with old blocks and regulated. Length, 400 feet. Area, 2,453 square yards.		
Labor furnished by the city		\$143 50
Teaming furnished by the city		87 44
Bricks furnished by the city		72 05
Lumber furnished by the city		3 25
Gravel furnished by the city		43 50
Amount paid James J. Brock under contract:		
823 linear feet edgestone set @ 21c.,	\$172 83	
2,453 square yards granite block paving laid @ 65c.	1,594 45	
568 square yards brick sidewalks laid @ 35c.	198 80	
		1,966 08
		<u>\$2,315 82</u>
Amount charged to appropriation for Street Department	\$93 62	
Amount charged to appropriation for street improvements	2,222 20	
		<u>2,315 82</u>
<i>Rutherford avenue</i> , from Tibbetts Town way to Chapman street. Repaved roadway with old blocks and regulated edgestones and side- walks. Length, 1,550 feet. Area, 6,746 square yards block paving; 2,132 feet edgestone reset; 1,232 square yards brick paving:		
Labor furnished by the city	\$3,338 01	
Teaming furnished by the city	470 21	
Hauling flagging furnished by the city, ...	7 03	
Edgestone furnished by the city	28 23	
Flagging furnished by the city	163 33	
Bricks furnished by the city	221 75	
Blocks furnished by the city	2 00	
Lumber furnished by the city	31 25	
Sand furnished by the city	94 80	
Gravel furnished by the city	1,800 75	
Nails furnished by the city	2 67	
Cement furnished by the city	9 19	
Stone furnished by the city	2 60	
		<u>\$6,171 82</u>

Roxbury street, from Eliot square to Columbus avenue. Resurfaced with 4½-inch macadam. Length, 471 feet. Area, 1,021 square yards, north side. Length, 368 feet. Area, 499 square yards, south side.

Labor furnished by the city . . .	\$149 76
Teaming furnished by the city . . .	24 64
Flagging furnished by the city . . .	18 65
Stone furnished by the city . . .	339 12
Steam roller furnished by the city . . .	104 00

\$636 17

St. James avenue, from Berkeley street to Huntington avenue. Resurfaced with 6-inch macadam, crossings relaid, coated with terracolio. Length, 967 feet. Area, 3,038 square yards.

Labor furnished by the city . . .	\$659 91
Teaming furnished by the city . . .	145 98
Blocks furnished by the city . . .	50
Stone and dust furnished by the city . . .	993 28
Gravel furnished by the city . . .	3 92
Terracolio furnished by the city, 440 gallons @ 15½ c.	68 20
Steam roller furnished by the city . . .	130 00

\$2,001 79

Scollay square and Court street, from Cornhill to Sudbury street. Paved with large blocks on a concrete base with pitch joints and regulated. Length, 530 feet. Area, 2,635 square yards.

Engineering and inspection	\$550 49
Teaming furnished by the city	1 79
Edgestone furnished by the city, 25 feet 7 inches @ 70c.	17 91
Bricks furnished by the city, 3,600 @ \$11	39 60
Stone furnished by the city, 510.30 tons @ \$1.60, ...	816 48
Advertising furnished by the city	15 30
Engineering expense furnished by the city	1 10
Templets furnished by the city	6 41
Amount paid to John I. Fitzgerald under contract:	

2,883 square yards, preparing site, @ 28c.	\$807 24
181 linear feet existing edgestone reset @ 11c.	19 91

Carried forward \$827 15 \$1,449 08

<i>Brought forward</i>	\$827 15	\$1,449 08
2,864 square yards concrete base furnished and laid @ 50c.,	1,432 00	
2,403 square yards granite block paving furnished and laid, pitch joints, @ \$2.50 . . .	6,007 50	
256 square yards existing granite block paving relaid, pitch joints, @ 80c.	204 80	
253 square yards flagging cross- walks furnished and laid, pitch joints, @ \$4.41 . . .	1,115 73	
4 square yards existing flagging crosswalks relaid, pitch joints, @ 80c.	3 20	
125 square yards existing brick sidewalks relaid @ 25c. . .	31 25	
Extra work — Lay sidewalk brick in cement at the north- erly side of Hanover street:		
8 hours, paver, @ 62½c. . . .	5 00	
8 hours labor @ 25c.	2 00	
Plus 15 per cent on \$7	1 05	
1 barrel Portland cement . . .	1 75	
		9,631 43
		\$11,080 51
Credit: 81,215 old paving blocks @ \$20, . . .		1,624 30
		\$9,456 21
Amount charged to appropriation for Street Department	\$8,354 04	
Amount charged to appropriation for street improvements	1,102 17	
		9,456 21
<i>Shawmut avenue</i> , from Lenox street to Sawyer street (work done in 1907).		
Amount paid to Daniel H. Shea for 1907 work,		<u>\$61 04</u>
<i>Southampton street</i> , from railroad bridge to Hilton street 400 feet easterly. Resurfaced with macadam taken from Gerard street. Length, 700 feet. Area, 3,500 square yards.		
Labor furnished by the city	\$250 13	
Teaming furnished by the city . . .	256 50	
Gravel furnished by the city	24 75	
Steam roller furnished by the city . .	123 50	
		\$654 88

Stanley street, from Quincy street to Sunset circle.

Roadway patched and sidewalks graveled.

Length, 555 feet. Area, 1,200 square yards.

Labor furnished by the city	. .	\$254 89
Teaming furnished by the city	. .	151 87
Stone furnished by the city	. .	7 62
Gravel furnished by the city	. .	106 88
Steam roller furnished by the city	. .	52 00

\$573 26

Amount charged to appropriation for

Street Department . . . \$272 01

Amount charged to appropriation for

street improvements . . . 301 25

573 26

Sudbury street, from Court street to Haymarket square. Paved with old blocks on gravel base, with gravel joints, and regulated edgestone, etc. Length, 901 feet. Area, 2,710 square yards: 1,800 feet edgestone reset, 1,575 square yards brick relaid.

Labor furnished by the city	. .	\$1,137 75
Teaming furnished by the city	. .	287 87
Edgestone furnished by the city	. .	9 51
Flagging furnished by the city	. .	41 69
Bricks furnished by the city	. .	51 98
Blocks furnished by the city	. .	10 00
Sand furnished by the city	. .	9 00
Gravel furnished by the city	. .	153 61
Cement furnished by the city	. .	1 48

\$1,702 89

Summer street, from Washington street to Hawley street. Wood blocks on concrete base and regulated. Length, 234 feet. Area, 688 square yards.

Engineering and inspection . . . \$172 75

Mack bricks furnished by the city, 300 @ \$29.26, 8 78

Vitrified bricks furnished by the city, 551 @ \$29.26 . . . 16 12

Templets furnished by the city . . . 4 27

Amount paid United States Wood Preserving Company under contract:

719 square yards, preparing site,
@ 50c. . . \$359 50

708 square yards concrete laid
@ \$1 . . . 708 00

5 square yards granite block
paving laid, pitch joints, @
\$1.05 . . . 5 25

Carried forward . . . \$1,072 75

\$201 92

<i>Brought forward</i>	\$1,072 75	\$201 92
7 square yards flagging cross-walks laid, pitch joints, @ \$1.05	7 35	
688 square yards wood block pavement furnished and laid @ \$3.25	2,236 00	
Extra work — Omit wood block for crosswalks at Washington street and substitute brick block:		
2 hours, foreman, @ 40c.	80	
12 hours, paver, @ 50c.	6 00	
26 hours labor @ 25c.	6 50	
Plus 15 per cent on \$13.30	2 00	
5 hours double team @ 55c.	2 75	
3 bags cement @ 40c.	1 20	
1 double load sand	1 60	
		3,336 95
		\$3,538 87
Credit: 15,171 old paving blocks @ \$20		303 42
		<u>*\$3,235 45</u>
<i>Taylor street</i> , from Neponset avenue to railroad.		
Resurfaced with 9-inch macadam. Length, 547 feet. Area, 1,256 square yards.		
Labor furnished by the city	\$805 49	
Teaming furnished by the city	601 25	
Stone furnished by the city, 383.475 tons @ \$1.46 $\frac{2}{3}$	562 38	
Steam roller furnished by the city	351 00	
		\$2,320 12
Amount charged to appropriation for Street Department	\$1,208 71	
Amount charged to appropriation for street improvements	1,111 41	
		<u>2,320 12</u>
<i>Vinton street</i> , from Preble street to Dorchester street. Resurfaced with 4-inch macadam. Length, 661 feet. Area, 1,358 square yards.		
Labor furnished by the city	\$346 37	
Teaming furnished by the city	24 50	
Horse roller furnished by the city	61 53	
Trap rock furnished by the city	359 12	
		<u>\$791 52</u>

Walk Hill street, from Blue Hill avenue to Harvard street. New edgestone, gutters and crushed stone sidewalks (work done in 1907).

Labor furnished by the city . . .	\$26 50
Teaming furnished by the city . . .	1,529 25
Blocks furnished by the city . . .	81 83
Amount paid to Mark H. Lynch, under contract, for work done in 1907, balance due	110 00

\$1,747 58

Amount charged to appropriation for Street Department	\$1,637 58
Amount charged to appropriation for street improvements	110 00

1,747 58

Wall street, from Causeway street to Minot street. Repaved with old blocks and regulated. Length 653 feet. Area, 1,573 square yards. 580 square yards brick relaid, 1,300 feet edgestone reset:

Labor furnished by the city . . .	\$735 02
Teaming furnished by the city . . .	170 25
Flagging furnished by the city . . .	17 11
Bricks furnished by the city . . .	77 00
Blocks furnished by the city . . .	21 00
Sand furnished by the city . . .	14 50
Gravel furnished by the city . . .	120 75
Cement furnished by the city . . .	70 .

\$1,156 33

Walnut avenue, from Circuit street to Humboldt avenue. Resurfaced with 4-inch macadam and westerly side coated with tarvia. Length, 1,497 feet. Area, 2,814 square yards.

Labor furnished by the city . . .	\$1,521 13
Teaming furnished by the city . . .	305 13
Edgestone furnished by the city . . .	9 68
Flagging furnished by the city . . .	6 10
Bricks furnished by the city . . .	9 91
Stone furnished by the city . . .	802 62
Sand furnished by the city . . .	6 30
Gravel furnished by the city . . .	44 80
Steam roller furnished by the city . . .	123 50
Tarvia furnished by the city . . .	107 55

\$2,936 72

Amount charged to appropriation for Street Department	\$1,158 01
Amount charged to appropriation for street improvements	1,778 71

2,936 72

Ward street, from Dorchester street to Preble street. Resurfaced with 6-inch macadam and regulated. Length, 510 feet. Area, 850 square yards.

Labor furnished by the city . . .	\$517 63	
Horse roller furnished by the city . . .	54 84	
Teaming furnished by the city . . .	6 70	
Bricks furnished by the city . . .	66 00	
Stone furnished by the city . . .	179 04	
Sand furnished by the city . . .	14 00	
Gravel furnished by the city . . .	15 00	
		\$853 21
Amount charged to appropriation for Street Department	\$206 88	
Amount charged to appropriation for street improvements	646 33	
		<u>853 21</u>

Warren street, from Kearsarge avenue to Moreland street (work done in 1907).

Amount paid John B. Harlow under contract for work done in 1907	<u>\$287 44</u>
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Washington street, from Dudley street to Bartlett street. Repaved with old blocks. Length, 755 feet. Area, 1,666 square yards. Westerly side Cliff street to Bartlett street and Cliff street to Dudley street, easterly side Cliff street to Bartlett street. By Peter Gilligan, contractor:

Inspection furnished by the city	\$48 00	
Teaming furnished by the city	2 24	
Edgestone furnished by the city	7 20	
Flagging furnished by the city	61 93	
Bricks furnished by the city	2 20	
Amount paid to Peter Gilligan under contract:		
8 linear feet edgestone set @ 21c.	\$1 68	
1,044 square yards granite block paving laid @ 65c.	678 60	
65 square yards brick sidewalk laid @ 35c.	22 75	
Extra work—Repair portions of street as directed between Cliff street and Dudley street on the west side of Washing- ton street and between Cliff		
<i>Carried forward</i>	\$703 03	\$121 57

<i>Brought forward</i>	\$703 03	\$121 57
street and Bartlett street on the east side of Washington street:		
622 square yards granite block pav- ing laid @ 65c.	404 30	
		1,107 33
		<u>\$1,228 90</u>

Washington street, from about 78 feet south of Court avenue to Cornhill; and *State street*, north and south of Old State House. Wood block paving on concrete base and regulated. Length, 513 feet Washington street. Area, 1,460 square yards; includes 290 feet of track. Length, 117 feet, State street, north. Area, 277 square yards north. Length, 123 feet, State street, south. Area, 327 square yards south.

Engineering and inspection furnished by the city		\$676 36
Teaming furnished by the city		3 55
Edgestone, 50 feet 9 inches, furnished by the city, @ 70c.		35 53
Templets furnished by the city		3 02
Advertising furnished by the city		7 50
Amount paid to James Doherty, under con- tract. <i>Washington street</i> , from Cornhill to about 78 feet south of Court avenue:		
1,297 square yards, preparing site, @ 29c.	\$376 13	
1,297 square yards concrete base fur- nished and laid @ 75c.	972 75	
1,300 square yards wood block pave- ment furnished and laid @ \$2.66	3,458 00	
<i>State street</i> , north side, Washington street to Devonshire street:		
246 square yards, preparing site, @ 29c.	71 34	
246 square yards concrete base furnished and laid @ 75c.	184 50	
246 square yards wood block pave- ment furnished and laid @ \$2.66	654 36	
<i>State street</i> , south side, Washington street to Devonshire street:		
284 square yards, preparing site, @ 29c.	82 36	
<i>Carried forward</i>	\$5,799 44	\$725 96

<i>Brought forward</i>	\$5,799 44	\$725 96
284 square yards concrete base furnished and laid @ 75c.	213 00	
284 square yards wood block pavement furnished and laid @ \$2.66	755 44	
Extra work — (Washington street). Furnish and place cement mortar to fill spaces between the outer web of street car rail and wood blocks where directed:		
38 hours labor @ 25c.	9 50	
Plus 15 per cent on \$9.50	1 43	
4½ barrels Portland cement @ \$1.60	6 80	
52 cubic feet sand @ 5c.	2 60	
Extra work — (Washington street). Break out and reset in cement the edgestones on east side near State street, north:		
3 hours, edgestone setter, @ 62½c.	1 88	
5 hours, stonecutter, @ 60c.	3 00	
18 hours labor @ 25c.	4 50	
Plus 15 per cent on \$9.38	1 41	
1 barrel Portland cement	1 60	
8 cubic feet sand @ 5c.	40	
Extra work — Relay flagging crosswalks, gravel joints, at intersections of State street (north and south) and Devonshire street:		
5 square yards flagging crosswalks relaid, State street, north, @ 65c.	3 25	
7 square yards flagging crosswalks relaid, State street, south, @ 65c.	4 55	
Extra work — Relay granite block paving, gravel joints, at intersection of State street, south, and Devonshire street:		
15 square yards granite block paving relaid @ 65c.	9 75	
<i>Carried forward</i>	\$6,818 55	\$725 96

<i>Brought forward</i>	\$6,818 55	\$725 96
Extra work — (State street, south). Cut out existing concrete base at Old State House where necessary:		
4 hours labor @ 25c.	1 00	
5 hours, stonecutter, @ 60c.	3 00	
Plus 15 per cent on \$4	60	
		6,823 15
		\$7,549 11
Credit: 43,890 old blocks @ \$20		877 80
		<u>*\$6,671 31</u>

Washington street, from Blue Hill avenue to Talbot avenue. Surface excavated and resurfaced with 3-inch macadam. Length, 7,000 feet. Area, 15,000 square yards.

Labor furnished by the city	\$1,876 12	
Teaming furnished by the city	613 25	
Stone furnished by the city	488 84	
Sand furnished by the city	9 00	
Gravel furnished by the city	5 92	
Steam roller furnished by the city	682 50	
		\$3,675 63
Amount charged to appropriation for Street Department	\$2,594 03	
Amount charged to appropriation for street improvements	1,081 60	
		<u>3,675 63</u>

Waumbeck street, from Wabeno street to Humboldt avenue. Resurfaced with 4-inch macadam. Length, 300 feet. Area, 700 square yards.

Labor furnished by the city	\$137 75	
Teaming furnished by the city	10 50	
Edgestone furnished by the city	14 00	
Blocks furnished by the city	62 50	
Stone furnished by the city	255 72	
Gravel furnished by the city	9 60	
Steam roller furnished by the city	65 00	
		\$555 07
Amount charged to appropriation for Street Department	\$213 25	
Amount charged to appropriation for street improvements	341 82	
		<u>555 07</u>

West Cedar street, from Mt. Vernon street to Chestnut street. Reset edgestone, removed cobble gutters and relaid with old blocks, relaid sidewalks and crossings and resurfaced with 4-inch macadam. Length, 240 feet. Area, 171 square yards block gutter, 605 feet edgestone reset, 377 square yards macadam resurfaced, 361 square yards brick sidewalk relaid.

Labor furnished by the city . . .	\$444 65
Teaming furnished by the city . . .	97 30
Edgestone furnished by the city . . .	8 75
Bricks furnished by the city . . .	30 25
Blocks furnished by the city . . .	134 98
Stone furnished by the city . . .	65 60
Sand furnished by the city . . .	6 75
Gravel furnished by the city . . .	19 75
Lumber furnished by the city . . .	1 45

\$809 48

West street, from Tremont street to Washington street. Paved with wood blocks on a concrete base. Length, 468 feet. Area, 1,140 square yards.

Engineering and inspection furnished by the city	\$304 67
Teaming furnished by the city	5 00
Mack bricks, 30 @ \$29.26, furnished by the city	88
Mack bricks, 887 @ \$32, furnished by the city, Asphalt repairs; paid Barber Asphalt Paving Company	28 38
Engineering expense furnished by the city	27 18
Templets furnished by the city	1 50
Amount paid United States Wood Preserving Company under contract:	3 60
1,175 square yards, preparing site, @ 50c.	\$587 50
4 linear feet edgestone set @ 21c.	84
242 cubic yards concrete base laid @ \$6	1,452 00
1,156 square yards wood block pavement furnished and laid @ \$3.25	3,757 00
3 square yards brick sidewalks laid @ 35c.	1 05
<i>Carried forward</i>	\$5,798 39
	\$371 21

Brought forward \$5,798 39 \$371 21

Extra work—Haul granite blocks as directed to the East Eagle street paving yard:

325 tons, one mile overhaul, per half mile, per ton, @ 11c., 71 50

325 tons, ferry tollage per ton @ .037c. 12 03

Extra work—Haul remainder of existing granite blocks to Lexington street between Putnam and Prescott streets:

76 tons, one mile overhaul, per half mile, per ton, @ 11c. 16 72

76 tons, ferry tollage per ton @ .037c. 2 81

Extra work—Furnish stone-cutter:

1 hour, stonecutter 55

Plus 15 per cent on 55c. 08

Extra work—Omit granite flagging for crosswalk at Washington street and substitute brick block:

5 hours, foreman, @ 40c. 2 00

7 hours, paver, @ 50c. 3 50

25 hours labor @ 25c. 6 25

4 days, watchman, @ \$2 8 00

Plus 15 per cent on \$19.75 2 96

6 hours, single team, @ 43 $\frac{3}{4}$ c. 2 63

2 barrels Portland cement @ \$1.75 3 50

1 $\frac{1}{2}$ double loads sand @ \$1.60 2 40

5,933 32

\$6,304 53

Credit: 25,205 old blocks @ \$20 504 10

\$5,800 43

Woodward street, from Dorchester street to Dorchester avenue. Resurfaced with 4-inch macadam. Length, 672 feet. Area, 785 square yards.

Labor furnished by the city . . . \$269 00

Horse roller furnished by the city . . . 54 84

Teaming furnished by the city . . . 3 50

Stone furnished by the city . . . 185 41

\$512 75

Zeigler street, from Washington street to Warren street. Granitoid concrete block pavement laid and regulated. Length, 315 feet. Area, 950 square yards.

Engineering and inspection furnished by the city	\$124 88
Teaming furnished by the city	17 92
Hauling edgestone furnished by the city	2 12
Edgestone furnished by the city	38 49
Engineer's expense furnished by the city	1 35
Templets furnished by the city	6 11
Amount paid to R. S. Blome Company, under contract:	
946 square yards, preparing site, @ 12c.	\$113 52
946 square yards granitoid concrete blocked pavement furnished and laid @ \$2.55	2,412 30
Extra work — Reset manhole cover to grade:	
1 cover reset	3 00
	2,528 82
	\$2,719 69
Credit: 9,295 old blocks	185 90
	\$2,533 79

HIGHWAYS, MAKING OF.

Ashland street, from Mill street to Everdean street. Surfaced with 6-inch macadam roadway, edgestones set, granite block paving laid, flagging crosswalks laid and crushed stone sidewalks laid. Length, 289 feet. Area, 771 square yards.

Labor, including engineering and inspection	\$64 62
Edgestone, circular, 9 feet 5 inches, furnished by the city, @ \$1.20	11 30
Edgestone, straight, 536 feet 8 inches, furnished by the city, @ 70c.	375 67
Flagging, 166 feet 11 inches, furnished by the city, @ 66c.	110 17
Blocks, 5,850, furnished by the city, @ \$47	274 95
Engineering expense furnished by the city	1 05
<i>Carried forward</i>	\$837 76

Brought forward \$837 76
 Amount paid Philip Doherty, under
 contract:

Removing trees, bushes, stumps, etc..	\$1 00	
132 cubic yards subgrad- ing (earth excava- tion) @ 50c.	66 00	
574 linear feet edgestone set @ 23c.	132 02	
217 square yards granite block paving laid @ 50c.	108 50	
33 square yards flagging crosswalks laid @ 80c.	26 40	
30 square yards crushed stone sidewalks fur- nished and placed @ 55c.	16 50	
Extra work—Roll and shape portions of the macadam roadway and crushed stone sidewalks (where there has been no construction) as di- rected:		
44 hours, foreman, @ 50c.	22 00	
240 hours labor @ 25c.	60 00	
Plus 15 per cent on \$82	12 30	
40 hours, steam roller, @ \$1.87½	75 00	
8 hours, double team, @ 62½c.	5 00	
290 feet B. M. spruce plank and stakes @ \$25 M.,	7 25	
		531 97

\$1,369 73

Avenue Louis Pasteur, from Longwood avenue to the Fenway
 (work not done). Length, 1,355 feet. Area, 9,800 square
 yards.

Labor, including engineering and in- spection	\$1,343 75
Teaming furnished by the city	3 00

Carried forward \$1,346 75

<i>Brought forward</i>	\$1,346 75	
Filling furnished by the city, 643.6 loads of 54 cubic feet @ 50c.	321 80	
Lumber furnished by the city, 120 feet spruce @ \$25	3 00	
Engineering expense furnished by the city	1 10	
		<u>\$1,672 65</u>

Bayswater street, from Saratoga street to the easterly line of Austin avenue extended (unfinished work from 1907). Surfaced with 6-inch macadam, new edgestone set, block paving laid, flagging crosswalks and crushed stone sidewalks laid. Length, 1,120 feet. Area, 4,622 square yards.

Labor, including engineering and inspection	\$47 75	
Teaming, water cart furnished by the city	6 00	
Flagging, 25 feet North River, furnished by the city, @ \$1.34	33 50	
Blocks, 300, furnished by the city, @ \$62	18 60	
Engineering expense furnished by the city	1 62	
Amount paid James Doherty under contract:		
1,163 cubic yards sub-grading (earth excavation) at 35c.	\$407 05	
2,203 linear feet edgestone set @ 17c.	374 51	
867 square yards granite block paving laid @ 50c.	433 50	
181 square yards flagging crosswalks laid @ 85c.	153 85	
4,166 square yards macadam surface furnished and placed @ 53c.	2,207 98	
1,724 square yards crushed stone sidewalks furnished and placed @ 49c.	844 76	
34 square yards loam furnished and placed @ 53c.	18 02	
<i>Carried forward</i>	\$4,439 67	\$107 47

<i>Brought forward.</i>			\$4,439 67	\$107 47
193.4 square yards slope paving furnished and placed @ \$2.35,	454 49			
19 covers reset @ \$3	57 00			
Extra work—Furnish stonecutter to dress circular edgestones:				
$\frac{1}{2}$ day, stonecutter, @ \$4	2 00			
Plus 15 per cent on \$2	30			
			\$4,953 46	
Less payments made in 1907	4,305 07			
				648 39
				<u>\$755 86</u>

Belfort street, from Sagamore street to Saxton street (work not started).

Engineering expense \$23 50

Bellevue street, from Kane street to Hamilton street. Surfaced with 6-inch macadam roadway, edgestones set, block paving laid, flagging crosswalks and crushed stone sidewalks laid. Length, 493 feet. Area, 1,260 square yards.

Engineering and inspection	\$392 16
Edgestone furnished by the city, 44 feet 2 inches @ 70c.	30 92
Edgestone circles furnished by the city, 270 feet 11 inches @ \$1.30	352 20
Edgestone furnished by the city, 770 feet 3 inches @ 74½c.	573 84
Flagging furnished by the city, 222 feet 3 inches at 66c.	146 74
Blocks furnished by the city, 9,100 @ \$55	500 50
Engineering expense furnished by the city	3 15
Amount paid John McCourt, under contract:	
Removing trees, bushes, etc.	\$1 00
398 cubic yards subgrading (earth excavation) at 45c.	179 10

Carried forward . . . \$180 10 \$1,999 51

<i>Brought forward</i> . . .	\$180 10	\$1,999 51
24 cubic yards sub- grading (rock ex- cavation) @ \$1.75,	42 00	
106 cubic yards filling furnished at 20c .	21 20	
1,095 linear feet edgestones set @ 21c. . . .	229 95	
389 square yards granite block paving laid @ 47c.	182 83	
38 square yards flagging crosswalks laid @ 90c.	34 20	
1,093 square yards mac- adam surface fur- nished and placed @ 68c.	743 24	
644 square yards crushed stone sidewalks furnished and placed @ 50c. . .	322 00	
11 covers reset @ \$3 .	33 00	
		1,788 52
		\$3,788 03

Credit:

222 feet 3 inches North River flagging charged in 1909 @ 66c.	\$146 74	
44 feet 1 inch North River flagging @ 66c.	29 10	
14 feet 2 inches edge- stone @ 70c. . . .	9 92	
		185 76
		<u>\$3,602 27</u>

Bennington street, from Chelsea street to Belle Isle inlet (work completed).

Engineering expense \$8 00

Benton street, from Tremont street to Columbus avenue (work not started).

Engineering expense \$52 10

Bernard street, from Talbot avenue to the railroad. Subgrading and filling, surfaced with 6-inch macadam roadway, edge-stone set, vitrified brick gutters; crosswalks laid on a

concrete base, with grout joints, and crushed stone sidewalks laid. Length, 946 feet. Area, 2,800 square yards.

Engineering and inspection . . . \$410 60

Advertising . . . 59 88

Engineering expense . . . 3 50

Amount paid William J. Barry, under contract:

Removing trees, bushes, etc. . . .	\$0 00
627 cubic yards sub- grading (earth ex- cavation) @ 50c.,	313 50
5 cubic yards sub- grading (rock ex- cavation) @ \$1.75,	8 75
93 cubic yards filling furnished @ 75c.,	69 75
1,820 linear feet straight edgestone fur- nished and set @ 95c. . . .	1,729 00
108 linear feet circular edgestone fur- nished and set @ \$1.50	162 00
11 square yards granite block paving fur- nished and laid @ \$2	22 00
28 square yards existing granite block pav- ing relaid @ 50c. .	14 00
646 square yards brick block paving fur- nished and laid @ \$1.75	1,130 50
54 square yards brick crosswalks fur- nished and laid @ \$2.25	121 50
2,199 square yards mac- adam surface fur- nished and placed @ 68c. . . .	1,495 32
1,406 square yards crushed stone sidewalks furnished and placed @ 30c. . .	421 80

Carried forward . . . \$5,488 12 \$473 98

Brought forward . . . \$5,488 12 \$473 98

17 covers reset @ \$3 . . . 51 00

Extra work — 4

hours, stonecutter,

on gutter mouth,

@ 60c. 2 40

Plus 15 per cent

on \$2.40 36

————— 5,541 88

\$6,015 86

Boardman street, from Saratoga street to Boston & Maine Railroad (work not done).

Teaming filling furnished by the city \$222 00

Bruce street, extended to Wrentham street. Surfaced with 6-inch macadam roadway, subgrading, edgestone set, gutter blocks laid, flagging crosswalks laid and crushed stone sidewalks laid. Length, 135 feet. Area, 435 square yards.

Labor including engineering and inspection furnished by the city . . . \$181 34

Teaming furnished by the city . . . 36 50

Flagging, 6 feet 4 inches, furnished by the city, @ 66c. 4 18

Stone, 139.075 tons, furnished by the city, @ \$1.60 222 52

Gravel, 26 double loads, furnished by the city, @ \$1.50 39 00

Engineering expense furnished by the city 3 60

Steam roller furnished by the city . . . 39 00

Amount paid Daniel E. Lynch, under contract:

363 cubic yards subgrading (earth excavation) @ 55c. . . \$199 65

370 linear feet edgestones set @ 25c. 92 50

210 square yards granite block paving laid @ 50c. 105 00

81 square yards flagging crosswalks laid @ 90c. 72 90

261 square yards macadam surface placed @ 40c. 104 40

Carried forward \$574 45 \$526 14

<i>Brought forward</i> . . .	\$574 45	\$526 14
221 square yards crushed stone sidewalks placed @ 37c. . .	81 77	
11 square yards brick sidewalks laid @ 40c.	4 40	
1 manhole cover reset, Extra work — Re- build catch-basins and manholes: 3½ days, foreman, @ \$3.25	12 25	
14¼ days labor @ \$2.25, 6 days, tender, @ \$2.50	32 06	
3 days, mason, @ \$6 .	15 00	
Plus 15 per cent on \$77.31	18 00	
	11 60	
1,650 sewer brick @ \$11 .	18 15	
4 barrels cement @ \$2,	8 00	
2 double loads sand @ \$2	4 00	
6 square feet North River flagging @ 33½c.	2 00	
Extra work—Haul- ing crushed stone and screenings from Columbia road crusher in- stead of from Cod- man street crusher: 135.1 tons, two miles over- haul, per half mile, per ton, @ 11c.,	59 44	
	\$844 12	
Less three days' use of city steam roller @ \$13	39 00	
	\$805 12	
Less previous pay- ment	336 23	
	468 89	
	\$995 03	
Credit: 200 blocks @ \$55 .	11 00	

\$984 03

Carmen street, from Shafter street to Kilton street (work not started).

Engineering	<u>\$90 25</u>
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Causeway street,* from near Beverly street to the Charlestown Bridge. Repaved with granite blocks, with pitch joints, on a concrete base, edgestones set, flagging crosswalks and brick sidewalks laid. (Work done in 1907.) Length, 312 feet. Area, 2,410 square yards.

Engineering	\$3 50
Amount paid William H. Cuddy, under contract, being balance from 1907	535 04
	<u>\$538 54</u>

Claybourne street, from Dakota street to Bowdoin street. Surfaced with 6-inch macadam roadway, artificial stone sidewalks laid, edgestones set, block paved gutters and flagging crosswalks laid. (Work done in 1907.) Length, 350 feet. Area, 1,011 square yards.

Engineering	\$3 75
Amount paid Sylvester Connolly, under contract, being balance from 1907	201 69
	<u>\$205 44</u>

Clement avenue, from Meredith street to Stratford street (work done in 1907).

Credit on vitrified bricks in 1907	<u>\$358 87</u>
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Corona street, from Bowdoin street to Geneva avenue. Surfaced with 6-inch macadam roadway and artificial stone sidewalks laid, subgrading, edgestones set, vitrified brick gutter; crosswalks laid on a concrete base, with grout joints. (Work not finished.) Length, 1,001 feet. Area, 2,558 square yards.

Labor, including engineering and inspection	\$570 25
Teaming furnished by the city	14 12
Stone furnished by the city	4 86
Advertising furnished by the city	116 50
Engineering expense furnished by the city	2 25
Steam roller furnished by the city	26 00

<i>Carried forward</i>	<u>\$733 98</u>
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* \$1,189.78 paid by Boston Elevated Railway Company.

<i>Brought forward</i>	\$733 98	
Amount paid William J. Barry, under contract:		
734 cubic yards sub-grading (earth excavation) @ 45c.,	\$330 30	
2 cubic yards sub-grading (rock excavation) @ \$1.75,	3 50	
1,883 linear feet straight edgestone furnished and set @ 95c.	1,788 85	
25 linear feet circular edgestone furnished and set @ \$1.50	37 50	
173 linear feet existing edgestone reset @ 20c	34 60	
53 square yards existing granite block paving relaid @ 50c.	26 50	
696 square yards brick block paving furnished and laid @ \$1.75	1,218 00	
33 square yards brick crosswalks furnished and laid @ \$2.25	74 25	
1,883 square yards macadam surface furnished and placed @ 68c.	1,280 44	
67 square yards crushed stone sidewalks furnished and placed, 1 inch deep, @ 9½c.	6 37	
16 covers reset @ \$3	48 00	
		4,848 31
Amount paid Jeremiah J. Sullivan, under contract:		
4,690 square feet artificial stone sidewalks furnished and laid @ 14.9c.	\$698 81	
<i>Carried forward</i>	\$698 81	\$5,582 29

<i>Brought forward</i>	\$698 81	\$5,582 29	
5,500 square feet artificial stone sidewalks furnished and laid (unfinished) @ 6c.,	330 00		
	\$1,028 81		
Less 15 per cent retained	154 32		
		874 49	
			<u>\$6,456 78</u>

Cottage street, from Maverick street to the northeasterly line of Gove street. Surfaced with 6-inch macadam roadway, edgestones set, block gutters and flagging crosswalks laid and crushed stone sidewalks laid, subgrading, and brick sidewalks laid. Length, 663 feet. Area, 2,278 square yards.

Labor furnished by the city, including engineering and inspection	\$112 25	
Edgestone furnished by the city, 60 feet 5 inches, circular, @ \$1.30	78 54	
Edgestone furnished by the city, 261 feet 10 inches @ 74c.	193 76	
Edgestone furnished by the city, 825 feet 10 inches @ 78c.	644 15	
Blocks furnished by the city, 10,025 @ \$62	621 55	
Bricks furnished by the city, 5,000 @ \$11.50	57 50	
Bricks furnished by the city, 21,550 @ \$11	237 05	
Flagging furnished by the city, 176 feet 1 inch North River @ \$1.34	235 95	
Engineering expense furnished by the city	2 90	
Amount paid James Doherty, under contract:		

Removing trees, bushes, stumps, etc.	\$1 00	
443 cubic yards sub- grading (earth ex- cavation) @ 47c.	208 21	
1,238 linear feet edgestone set @ 20c.	247 60	
<i>Carried forward</i>	\$456 81	\$2,183 65

<i>Brought forward</i> . . .	\$456 81	\$2,183 65
446 square yards granite block paving laid @ 67c. . .	298 82	
55 square yards flagging crosswalks laid @ 97c. . .	53 35	
1,902 square yards macadam surface furnished and placed @ 56c. . .	1,065 12	
424 square yards crushed stone sidewalks furnished and placed @ 51c. . .	216 24	
522 square yards brick sidewalks laid @ 44c. . .	229 68	
5 covers reset @ \$3 . . .	15 00	
Extra work — Furnish stonecutter to dress flagging, 6 hours @ 50c. . .	3 00	
Plus 15 per cent on \$3 . . .	45	
Extra work — Haul flagging from South Boston paving yard instead of from South End paving yard, 19.6 tons, one mile overhaul, per half mile, per ton, @ 11c. . .	4 31	
Overhaul — Section 1, Article E:		
5 tons surplus material hauled more than one mile and not more than one and one-half miles, one-half mile overhaul, per half mile, per ton, @ 11c. . .	55	
Extra work — Furnish and place filling at approaches		

Carried forward . . . \$2,343 33 \$2,183 65

Brought forward . . . \$2,343 33 \$2,183 65

to Gove street and
Cottage street:

34½ cubic yards filling
furnished a n d
placed @ 50c. . . 17 25

Extra work — Re-
set edgestone and
repave gutter over
water trench:

2½ hours, paver, @
62½c. . . . 1 56

1½ hours, rammer, @
28½c. . . . 42

2½ hours, tender, @
25c. . . . 62

Plus 15 per cent on
\$2.60 39

————— 2,363 57

\$4,547 22

Credit:

775 blocks @ \$68 . . . \$18 70

24 feet 7 inches edge-
stone @ 70c. . . 17 21

2 small corners @
\$3.60 7 20

————— 43 11

————— \$4,504 11

Cottage terrace, from East Cottage street to Marshfield street
(work not started).

Engineering \$10 00

Cotton street, from Walter street to Fairview street. Surfaced with
6-inch macadam roadway and artificial stone sidewalks
laid, subgrading, edgestones set, granite paved gutters
laid, vitrified brick block gutters, and crosswalks laid on a
concrete base, with grout joints, and loam spaces filled and
seeded. Length, 1,435 feet. Area, 2,083 square yards
roadway and 6,552 square feet sidewalks.

Labor, including engineering and in-
spection \$644 09

Teaming furnished by the city . . . 89 25

Stone furnished by the city, 17.975
tons @ \$1.60 28 76

Stone furnished by the city, 23.825
tons @ \$1.25 29 78

Mack bricks furnished by the city, 530
@ \$32 16 96

Carried forward \$808 84

<i>Brought forward</i>	\$808 84	
Gravel furnished by the city, 1 double load	1 40	
Cement furnished by the city, 1 $\frac{1}{4}$ barrels @ \$1.75	2 19	
Advertising furnished by the city	145 91	
Engineering expense furnished by the city	4 40	
Steam roller furnished by the city	97 50	
Amount paid Thomas A. Nolan, under contract:		
6,552 square feet artificial stone sidewalks furnished and laid @ 16 $\frac{1}{4}$ c.	\$1,064 70	
Extra work — Built underdrains for sidewalks	31 00	
		1,095 70
Amount paid Peter F. Connolly, under contract:		
Removing trees, bushes, etc.	\$1 00	
1,073 cubic yards sub-grading (earth excavation) @ 39c.	418 47	
26 cubic yards sub-grading (rock excavation) @ \$1.75, ...	45 50	
1,396 linear feet straight edgestone furnished and set @ 98c.	1,368 08	
25 linear feet circular edgestone furnished and set @ \$1.80	45 00	
78 linear feet existing edgestone reset @ 60c.	46 80	
22 square yards granite block paving furnished and laid @ \$1.80	39 60	
64 square yards existing granite block paving relaid @ 40c.	25 60	
<i>Carried forward</i>		\$1,990 05 \$2,155 94

Brought forward . . . \$1,990 05 \$2,155 94

494 square yards brick
block paving fur-
nished and laid @
\$1.74 . . . 859 56

12 square yards existing
flagging crosswalks
relaid @ 60c. . . 7 20

26 square yards brick
crosswalks fur-
nished and laid @
\$2.35 . . . 61 10

1,675 square yards mac-
adam surface fur-
nished and placed
@ 59c. . . 996 63

274 square yards loam
furnished, placed
and seeded @ 44c., 120 56

12 covers reset @ \$3 . 36 00

\$4,071 10

Less 500 vitrified
brick @ \$29.26 M., 14 63

4,056 47

\$6,212 41

Covington street, from East Eighth street to Columbia road
(work not started).

Engineering \$80 75

Dakota street, from Greenbrier street to Geneva avenue. Sur-
faced with 6-inch macadam, edgestones set, block gutters
laid, vitrified brick crosswalks laid on a concrete base,
with grout joints, and artificial stone sidewalks laid.
Length, 1,453 feet. Area, 4,240 square yards.

Labor, including engineering and in-
spection \$829 37

Teaming furnished by the city . . . 14 50

Stone furnished by the city . . . 9 93

Advertising furnished by the city . 121 58

Engineering expense furnished by the
city 5 70

Steam roller furnished by the city . 13 00

Artificial stone sidewalk rebate . . 42 66

Carried forward \$1,036 74

<i>Brought forward</i>	\$1,036 74
Amount paid Jeremiah J. Sullivan, under contract:	
16,899 square feet artificial stone sidewalks furnished and laid @ 15c.	\$2,534 85
Extra work — Re- moving boulder in sidewalk:	
4 hours, stonecutter, @ 60 c.	2 40
Plus 15 per cent on \$2.40	36
	2,537 61

Amount paid William J. Barry, under
contract:

Removing trees, bushes, etc.	\$25 00
1,117 cubic yards sub- grading (earth ex- cavation) @ 45c., ...	502 65
1 cubic yard sub- grading (rock ex- cavation)	1 75
2,629 linear feet straight edgestone fur- nished and set @ 95c.	2,497 55
103 linear feet circular edgestone fur- nished and set @ \$1.50	154 50
191 linear feet existing edgestone reset @ 20c.	38 20
77 square yards existing granite block pav- ing relaid @ 50c., ...	38 50
990 square yards brick block paving fur- nished and laid @ \$1.75	1,732 50
38 square yards exist- ing flagging cross- walks relaid @ 50c.	19 00
<i>Carried forward</i>	\$5,009 65
	\$3,574 35

Brought forward . . . \$5,009 65 \$3,574 35

83 square yards brick
crosswalks fur-
nished and laid @
\$2.25 . . . 186 75

3,255 square yards mac-
adam surface fur-
nished and placed
@ 68c. . . 2,213 40

15 covers reset @ \$3 . . 45 00

Extra work — Omit
crushed stone side-
walks:

32 hours labor @ 25c. . . 8 00

Plus 15 per cent
on \$8 . . . 1 20

Extra work — Relay
brick gutter near
Greenbrier street:

5 hours labor @ 25c., . . 1 25

2 hours, paver, @ 50c., . . 1 00

1 hour, rammer . . . 28

Plus 15 per cent
on \$2.53 . . . 38

7,466 91

\$11,041 26

Dayton street, from Nixon street southwesterly to the railroad
(work not started).

Engineering \$4 00

Everdean street, from Green Hill street to Ashland street (un-
finished work from 1907). Length, 397 feet. Area, 1,147
square yards. Subgraded, edgestones set, block gutters
laid, flagging crosswalks laid and crushed stone sidewalks
laid.

Labor, including engineering and in-
spection \$115 44

Edgestone furnished by the city, 2
small corners @ \$3.60 . . . 7 20

Edgestone furnished by the city, 18
feet 10 inches, circular, @ \$1.30 . . 24 49

Edgestone furnished by the city, 37
feet 4 inches, circular, @ \$1.20 . . 44 80

Edgestone furnished by the city, 165
feet, straight, @ 74½c. . . . 122 93

Edgestone furnished by the city, 566
feet, straight, @ 70c. . . . 396 20

Carried forward \$711 06

<i>Brought forward</i>	\$711 06
Flagging furnished by the city, 166 feet 8 inches North River @ 66c.	110 00
Blocks furnished by the city, 7,275 @ \$55	400 12
Engineering expense furnished by the city	65
Amount paid John W. Collins, under contract:	

Removing trees, bushes, stumps, etc., ...	\$1 00
295 cubic yards subgrading (earth excavation) @ 50c.	147 50
825 linear feet edgestones set @ 22½c.	185 63
291 square yards granite block paving laid @ 50c.	145 50
37 square yards flagging crosswalks laid @ 70c.	25 90
655 square yards crushed stone sidewalks furnished and placed @ 50c.	327 50
	833 03

\$2,054 86

Everdean street, from Green Hill street to Preston street (unfinished work from 1907). Surfaced with macadam. Subgrading, edgestones set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks placed. Length, 411 feet. Area, 982 square yards.

Engineering and inspection	\$226 26
Edgestone furnished by the city, 37 feet 9 inches, circular, @ \$1.30	49 08
Edgestone furnished by the city, 759 feet 6 inches, straight, @ 74½c.	565 83
Flagging furnished by the city, 105 feet 2 inches @ 66c.	69 41
Flagging furnished by the city, 84 feet 11 inches @ \$1.35	114 64
Blocks furnished by the city, 8,351 @ \$55	459 31
Engineering expense furnished by the city	2 50
<i>Carried forward</i>	\$1,487 03

Brought forward . . . \$1,487 03
 Amount paid Philip Doherty, under
 contract:

Removing trees, bushes, stumps, etc.,	1 00
485 cubic yards subgrad- ing (earth excava- tion) @ 50c. . . .	242 50
865 linear feet edgestones set @ 23c. . . .	198 95
327 square yards granite block paving laid @ 50c.	163 50
41 square yards flagging crosswalks laid @ 80c.	32 80
809 square yards macadam surface furnished and placed @ 63c. .	509 67
805 square yards crushed stone sidewalks fur- nished and placed @ 57c.	458 85
2 covers reset @ \$3 .	6 00
471 tons surplus material hauled to Norwood street, one-half mile overhaul, per half mile, per ton, @ 11c.,	51 81

\$1,665 08

\$3,152 11

Evergreen street, from South Huntington avenue about 443 feet
 easterly. Grading (uncompleted).

Engineering and inspection	\$343 28
Advertising	42 00

Amount paid Mark H. Lynch, under
 contract:

450 cubic yards earth ex- cavation @ 60c. . .	\$270 00
435 cubic yards rock ex- cavation @ 60c. . .	261 00

\$531 00

Less 15 per cent retained	79 65
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451 35

\$836 63

Farquhar street, from South street to Selwyn street (work not
 started).

Engineering	<u>\$117 25</u>
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Fletcher street, from Centre street to South street (work not started).

Engineering	<u>\$220 00</u>
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Fottler road, from Walk Hill street to Tileston avenue (work done in 1907).

Engineering expense	\$1 80
Final payment to Fied L. Williams, under contract	349 73
	<u>\$351 53</u>

Frankfort street, from Maverick street to Gove street. Surfaced with 6-inch macadam, edgestones set, block gutters laid, flagging crosswalks laid, brick sidewalks laid and crushed stone sidewalks laid. Length, 608 feet. Area, 2,297 square yards.

Engineering and inspection	\$116 00
Edgestone furnished by the city, 8 small corners @ \$3.60	28 80
Edgestone furnished by the city, 47 feet 3 inches, circular, @ \$1.30	61 42
Edgestone furnished by the city, 515 feet 2 inches, straight, @ 74c.	381 22
Edgestone furnished by the city, 571 feet 11 inches, straight, @ 70c.	400 34
Flagging furnished by the city, 165 feet 5 inches granite @ 85c.	140 60
Flagging furnished by the city, 183 feet 4 inches @ \$1.34	245 66
Bricks furnished by the city, 25,000 @ \$11	275 00
Blocks furnished by the city, 11,433 @ \$62	708 85
Engineering expense furnished by the city	3 89
Amount paid James Doherty, under contract:	

Removing trees, bushes, stumps, etc.	\$2 00
787 cubic yards sub- grading (earth ex- cavation) @ 48c.,	377 76
1,228 linear feet edgestones set @ 21c.	257 88
481 square yards granite block paving laid @ 68c.	327 08

<i>Carried forward</i>	<u>\$964 72</u> \$2,361 78
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<i>Brought forward</i> . . .	\$964 72	\$2,361 78
59 square yards flagging crosswalks laid @ 98c.	67 62	
1,895 square yards mac- adam surface fur- nished and laid @ 57c.	1,080 15	
326 square yards crushed stone sidewalks furnished and laid @ 52c.	169 52	
602 square yards brick sidewalks laid @ 45c.	270 90	
10 covers reset @ \$3 .	30 00	
Extra work — Fur- nish stonecutter to dress flagging: 16½ hours, stonecutter, @ 50c.	8 25	
Plus 15 per cent on \$8.25	1 24	
Extra work — Haul- ing flagging from South Boston pav- ing yard instead of from South End paving yard: 28 tons, one mile over- haul, per half mile, per ton, @ 11c. . .	6 16	
Overhaul—Section 1, Article E: 12 tons surplus mate- rial hauled more than one mile and not more than one and one-half miles, one-half mile over- haul, per half mile, per ton, @ 11c. . .	1 32	
	2,599 88	
		<u>\$4,961 66</u>

Harlem street, from Glenway street to Glenwood street. Sub-
grading, surfaced with 6-inch macadam, edgestones set,
block gutters laid, vitrified brick block gutters, and cross-

walks laid on a concrete base, with grout joints. Length, 582 feet. Area, 1,681 square yards.

Engineering and inspection \$253 50

Advertising 58 80

Engineering expense 1 65

Amount paid James Doherty, under contract:

Removing trees, bushes, etc. . . . \$1 00

185 cubic yards subgrading (earth excavation) @ 43c. . . 79 55

6 linear feet straight edgestones furnished and set @ \$1 6 00

21.5 linear feet circular edgestones furnished and set @ \$1.50 32 25

26 square yards existing granite block paving relaid @ 50c., . . . 13 00

393 square yards brick block paving furnished and laid @ \$1.79 703 47

37 square yards brick crosswalks furnished and laid @ \$2.50 92 50

1,310 square yards macadam surface furnished and placed @ 65c. 851 50

5 square yards crushed stone sidewalks furnished and placed @ 50c. 2 50

6 covers reset @ \$3 18 00

————— 1,799 77

\$2,113 72

Hobson street, from Faneuil street to Hobart street (work done in 1907).

Engineering \$21 00

Final payment to Thomas J. Young Company, under contract, for work done in 1907. 87 84

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\$108 84

Kerwin street, from Talbot avenue to Bernard street (work done in 1907).

Engineering expense	<u>\$1 80</u>
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Kilton street, from Harvard street to Park street. Subgrading and filling. Surfaced with 6-inch macadam, edgestones set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks placed. Length, 842 feet. Area, 2,432 square yards. Work begun in 1907.

Engineering and inspection . . .	\$20 75
Teaming furnished by the city . . .	24 50
Blocks furnished by the city, 5,538 @ \$55	304 59
Stone furnished by the city, 22.525 tons @ \$1.60	36 04
Engineering expense	75

Amount paid Philip Doherty, under contract:

294 cubic yards subgrading (earth excavation) @ 47c.,	\$138 18
95 cubic yards filling @ 90c.	85 50
1,545 linear feet edgestones set @ 24c.	370 80
662 square yards granite block paving laid @ 50c.	331 00
45 square yards flagging crosswalks laid @ 80c.	36 00
2,109 square yards macadam surface placed @ 30c.	632 70
1,135 square yards crushed stone sidewalks placed @ 23c.	261 05
7 covers reset @ \$3	21 00

Extra work — Re-pave gutter and reset edgestones on account of settlement caused by water trenches:

5½ hours, paver, @ 62½c.	3 44
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<i>Carried forward</i>	\$1,879 67 \$386 63
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Brought forward . . . \$1,879 67 \$386 63

5½ hours labor @
25c. 1 37

Plus 15 per cent
on \$4.81 72

Extra work — Raise
and lower man-
hole covers over 6
inches:

12 hours, bricklayer, @
55c. 6 60

27½ hours labor @
25c. 6 88

Plus 15 per cent
on \$13.48 2 02

1,100 bricks @ \$12 M. 13 20

3 barrels cement @
\$1.25 3 75

1 double load sand 2 00

\$1,916 21

Omit hauling of
crushed stone and
screenings for mac-
adam and crushed
stone sidewalks:

Less 1,108 tons of
crushed stone de-
livered on site of
work by city @
34c. per ton 376 72

1,539 49

\$1,926 12

Larchmont street, from Waldeck street to Greenbrier street. Sub-
grading, surfacing with 6-inch macadam, edgestones set,
block gutters laid, flagging crosswalks laid, loam furnished
and placed and artificial stone sidewalks laid. Length,
1,077 feet. Area, 3,343 square yards.

Engineering and inspection \$437 77

Edgestone furnished by the city, 219
feet 3 inches @ 74½c. 163 34

Edgestone furnished by the city,
1,370 feet 4 inches @ 75c. 1,027 75

Blocks furnished by the city, 16,835
@ \$55 925 93

Engineering expense-furnished by the
city 3 25

Carried forward \$2,558 04

<i>Brought forward</i> . . .	\$2,558 04	
Amount paid D. E. Coleman Company, under contract:		
Removing trees, bushes, etc. . . .	30 00	
901 cubic yards sub- grading (earth ex- cavation) @ 45c.,	405 45	
2,110 linear feet edgestone set @ 23c. . . .	485 30	
710 square yards granite block paving laid @ 45c. . . .	319 50	
17 square yards flagging crosswalks laid @ 75c. . . .	12 75	
2,417 square yards macad- am surface fur- nished and placed @ 58c. . . .	1,401 86	
397 square yards loam furnished and placed @ 45c. . .	178 65	
11 covers reset @ \$3 . .	33 00	
		\$2,866 51

Amount paid Warren Brothers Com-
pany, under contract:

10,741 square feet artificial stone sidewalks furnished and laid @ 20c.	2,148 20	
		<u>\$7,572 75</u>

Larkin street, from Hampden street to Adams street. Sub-
grading, surfacing with 6-inch macadam, edgestones set,
block gutters laid, vitrified brick block gutters laid, and
vitrified brick crosswalks laid on a concrete base, with
grout joints, and brick sidewalks laid; preliminary plank-
walks built by city force. (Work begun in 1907.) Length,
313 feet. Area, 453 square yards.

Labor, including engineering and in- spection	\$242 63	
Teaming furnished by the city . . .	31 25	
Advertising furnished by the city . .	53 00	
Engineering expense furnished by the city	2 55	

Amount paid William J. Rafferty &
Co., under contract:

229 cubic yards sub- grading (earth ex- cavation) @ 50c.,	\$114 50	
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<i>Carried forward</i>	\$114 50	\$329 43
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<i>Brought forward</i>	\$114 50	\$329 43	
375 linear feet straight edgestone fur- nished and set @ 93c.	348 75		
26 linear feet circular edgestone fur- nished and set @ \$1.50	39 00		
294 linear feet existing edgestone reset @ 18c.	52 92		
48 square yards granite block paving re- laid @ 55c.	26 40		
183 square yards brick block paving fur- nished and laid @ \$1.80	329 40		
15 square yards brick crosswalks fur- nished and laid @ \$2.60	39 00		
273 square yards mac- adam surface fur- nished and placed @ 72c.	196 56		
181 square yards brick sidewalks fur- nished and laid @ \$1.10	199 10		
90 square yards existing brick sidewalks re- laid @ 30c.	27 00		
4 covers reset @ \$3, Extra work — Fur- nish stonecutter to dress old edge- stone:	12 00		
3 days, stonecutter, @ \$3.50	10 50		
Plus 15 per cent on \$10.50	1 58		
		1,396 71	
			<u>\$1,726 14</u>

Lincoln street, southerly side at junction with Cambridge street.

Widened.

Labor furnished by the city	\$250 97
Teaming furnished by the city	214 33

<i>Carried forward</i>	\$765 30
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<i>Brought forward</i>	\$765	30	
Edgestone furnished by the city, 57 feet 2 inches, circular, @ \$1.30	74	31	
Lumber furnished by the city, 5 cedar posts @ 55c.	2	75	
Lumber furnished by the city, 104 feet spruce @ \$25	2	60	
Stone furnished by the city, 195.5875 tons @ \$1.60	312	94	
Nails furnished by the city, 4 pounds @ 2½c.		10	
Gravel furnished by the city, 40½ double loads @ \$1.55	62	78	
Advertising furnished by the city	31	00	
Engineering expense furnished by the city		60	
Steam roller furnished by the city	97	50	
			<u>\$1,049 88</u>

Mallet street, from Florida street to Adams street. Subgrading, surfaced with 6-inch macadam, edgestones set, block gutters laid, flagging crosswalks laid, loam furnished and placed and artificial stone sidewalks laid. (Work begun in 1907.)
Length, 730 feet. Area, 2,115 square yards.

Engineering and inspection	\$46	63	
Engineering expense		70	
Amount paid Timothy F. Bradley, under contract:			
Removing trees, bushes, stumps, etc.	\$25	00	
455 cubic yards subgrading (earth excavation) @ 60c.	273	00	
9 cubic yards subgrading (rock excavation) @ \$1.75	15	75	
1,439 linear feet edgestone set @ 24c.	345	36	
553 square yards granite block paving laid @ 50c.	276	50	
48 square yards flagging crosswalks laid @ 50c.	24	00	
1,640 square yards macadam surface placed @ 40c.	656	00	
<i>Carried forward</i>	\$1,615	61	\$47 33

<i>Brought forward</i> . . .	\$1,615 61	\$47 33
5 covers reset @ \$3 . . .	15 00	
Extra work — Furnish, place and seed loam for the loam spaces:		
275 square yards loam furnished, placed and seeded @ 50c.,	137 50	
Extra work — Haul crushed stone dust from Columbia road crusher instead of from Codman street crusher, 87 tons crushed stone hauled one and a half miles, over-haul per half mile, per ton, @ 11c. . .	28 71	
Extra work — Haul flagging from South End paving yard:		
1½ days, double team, @ \$6 . . .	9 00	
	\$1,805 82	
Less previous payments . . .	1,475 17	
		330 65
Amount paid Simpson Brothers Corporation, under contract:		
5,925 square feet artificial stone sidewalks furnished and laid @ 20c. . .	\$1,185 00	
Less previous payment . . .	419 05	
		765 95
		<u>\$1,143 93</u>

Mapleton street, from Murdock street to Market street. Sub-grading, surfaced with 6-inch macadam, granite block paving laid, edgestones set, vitrified brick gutters, and crosswalks laid on a concrete base, with grout joints, and crushed stone sidewalks laid. (Work begun in 1907.) Length, 1,714 feet. Area, 3,319 square yards.

Engineering and inspection	\$220 07
Hauling flagging furnished by the city	8 11
Edgestone, 706 feet, furnished by the city, @ 75c.	529 50
Flagging, 105 feet 2 inches, furnished by the city, @ 66c.	69 41
Blocks, 818, furnished by the city, @ \$62 M.	50 72
Stone, 370.985 tons, furnished by the city, @ \$1.60	593 58
Engineering expense furnished by the city	1 45
Steam roller furnished by the city .	100 75
Amount paid Coyle & Clark, under contract:	

914 cubic yards subgrad- ing (earth excava- tion) @ 50c. . . .	\$457 00
3 cubic yards subgrad- ing (rock excava- tion) @ \$1.75 . . .	5 25
2,329 linear feet edgestone set @ 25c.	582 25
38 square yards granite block paving laid @ 50c.	19 00
2,577 square yards macad- am surface placed @ 25c.	644 25
1,627 square yards crushed stone sidewalks placed @ 25c. . . .	406 75
9 covers reset @ \$3	27 00
Extra work — Omit granite block pav- ing for gutters and substitute brick:	
752 square yards brick gutters laid @ 50c. . . .	376 00
Extra work — Haul bricks for gutters and crosswalks:	
38,297 bricks hauled @ \$2.50 M.	95 74
<i>Carried forward</i>	\$2,613 24 \$1,573 59

Brought forward . . . \$2,613 24 \$1,573 59

Extra work — Reset
edgestone on ac-
count of settle-
ment caused by
delay in receiving
stock: —

2 days, edgestone set-
ter, @ \$5 . . . 10 00

1½ days, rammer, @
\$2.25 . . . 3 38

4¼ days, helper, @ \$2, . . . 8 50

1 day labor @ \$2 . . . 2 00

Plus 15 per cent on
\$23.88 . . . 3 58

Extra work — Omit
brick paving for
crosswalks and
substitute flag-
ging:

23 square yards flagging
crosswalks laid @
50c. 11 50

\$2,652 20

Less 5¼ days' use of
city steam roller
@ \$13 68 25

\$2,583 95

Less previous pay-
ments 1,489 62

1,094 33

\$2,667 92

Credit: 721 Mack bricks @ \$33.50 . . . 24 15

\$2,643 77

Marmion street, from Cornwall street 306 feet northeasterly
(work done in 1907).

Edgestone, 18 feet 9 inches, circular,
furnished by the city, @ \$1.30 . . . \$24 38

Engineering expense furnished by the
city 10

\$24 48

Maybrook street, from Glenway street to Greenwood street
(work not started).

Engineering \$12 00

Montfern avenue, from Washington street to Faneuil street
(work not started).

Engineering \$14 00

Mountain avenue, from Lauriat avenue to Ballou avenue
(work not started).

Engineering \$25 00

Newcastle road, from Faneuil street to Hobson street
(work not started).

Engineering \$85 00

Norton street, from Bowdoin street to Speedwell street (work
started in 1907). Subgrading, surfaced with 6-inch
macadam, edgestones set, block gutters laid, flagging
crosswalks laid and artificial stone sidewalks laid. Length,
530 feet. Area, 1,530 square yards.

Engineering and inspection \$416 79

Edgestone, 2 small corners, furnished
by the city, @ \$3.60 7 20

Edgestone, 19 feet 4 inches, straight,
furnished by the city, @ 70c. 13 53

Edgestone, 69 feet 11 inches, circular,
furnished by the city, @ \$1.30 90 90

Edgestone, 84 feet 7 inches, circular,
furnished by the city, @ \$1.20 101 50

Edgestone, 845 feet, straight, furnished
by the city, @ 74½c. 629 53

Flagging, 80 feet 9 inches, furnished
by the city, @ 66c. 53 30

Flagging, 84 feet 4 inches, furnished
by the city, @ \$1.34 113 00

Blocks, 11,252, furnished by the city,
@ \$55 618 86

Advertising 58 00

Engineering expense 2 00

Amount paid W. A. Murtfeldt Com-
pany, under contract:

6,054 square feet artificial stone
sidewalks furnished and laid @
16.65c. 1,007 99

Amount paid D. E. Coleman Com-
pany, under contract:

Removing trees,
bushes, etc. \$1 00

395 cubic yards sub-
grading (earth
excavation) @
45c. 177 75

Carried forward \$178 75 \$3,112 60

<i>Brought forward</i> . . .	\$178 75	\$3,112 60	
27 cubic yards sub- grading (rock excavation) @ \$1.75 . . .	47 25		
1,024 linear feet edge- stone set @ 22c. . .	225 28		
413 square yards gran- ite block paving laid @ 45c. . .	185 85		
98 square yards flag- ging crosswalks laid @ 75c. . .	73 50		
1,157 square yards mac- adam surface furnished and placed @ 58c. . .	671 06		
8 covers reset @ \$3 . . .	24 00		
		1,405 69	
			\$4,518 29

Norwood street, from Tolman street northwesterly about 400 feet.
Constructed with 6-inch macadam, edgestones set, granite
block gutters laid, flagging crosswalks hauled and laid and
crushed stone sidewalks laid. Length, 447 feet. Area,
1,291 square yards.

Engineering and inspection . . .	\$221 62	
18 feet 8 inches edgestone, furnished by the city, @ 74½c. . .	13 90	
10 feet 11 inches circular edgestone, furnished by the city, @ \$1.30 . . .	14 20	
449 feet 6 inches edgestone, furnished by the city, @ 75c. . .	337 13	
52 feet 3 inches flagging, furnished by the city, @ \$1.35 . . .	70 54	
7,500 blocks, furnished by the city, @ \$55 per M. . .	412 50	
Engineering expense . . .	1 20	
Amount paid Philip Doherty, under contract:		
Removing trees, bushes, etc. . .	\$1 00	
112 cubic yards sub- grading (earth excavation) @ 50c. . .	56 00	
<i>Carried forward</i> . . .	\$57 00	\$1,071 09

<i>Brought forward</i> . . .	\$57 00	\$1,071 09	
196 cubic yards filling @ 80c.	156 80		
913 linear feet edgestone set @ 23c.	209 99		
315 square yards gran- ite block paving ing laid @ 50c.	157 50		
11 square yards flag- ging crosswalks laid @ 90c.	9 90		
981 square yards mac- adam surface fur- nished and placed @ 65c.	637 65		
646 square yards crushed stone sidewalks fur- nished and placed @ 55c.	355 30		
5 covers reset @ \$3	15 00		
40 linear feet wooden fence furnished and built @ 50c., ...	20 00		
		1,619 14	
			<u>\$2,690 23</u>

Parkview street, Hutchings street to Seaver street. Con-
structed with 6-inch macadam, edgestones set, granite
block paving laid and flagging crosswalks laid. Arti-
ficial stone sidewalks laid. Length, 403 feet. Area, 1,182
square yards. (Unfinished work from 1907.)

Engineering and inspection	\$161 50	
78 feet 9 $\frac{3}{4}$ inches circular edgestone, furnished by the city, @ \$1.30	102 45	
Advertising	58 60	
Engineering expense	1 90	
Steam roller furnished by the city	13 00	
Amount paid to R. L. Barrett, under contract:		
Removing trees, bushes, etc.	\$0 00	
438 cubic yards subgrading (earth excavation) @ 58c.	254 04	
6 cubic yards subgrading (rock excavation) @ \$1.75	10 50	
819 linear feet edgestone set @ 18c., ...	147 42	
294 square yards granite block pav- ing laid @ 50c.	147 00	
<i>Carried forward</i>	\$558 96	\$337 45

<i>Brought forward</i>	\$558 96	\$337 45
25 square yards flagging crosswalks laid @ 70c.	17 50	
904 square yards macadam surface furnished and placed @ 68c.,	614 72	
3 covers reset @ \$3	9 00	
	\$1,200 18	
Less 1 day's use of city steam roller	13 00	
	\$1,187 18	
Less amount paid in 1907	336 97	
		850 21
Amount paid to Robert Eagar, Jr., under contract:		
4,763 square feet artificial stone sidewalks furnished and laid @ 17½c.		833 53
		<u>\$2,021 19</u>
<i>Pequot street</i> , Wait street to Calumet street (work not started).		
Engineering		<u>\$29 00</u>
<i>Pontiac street</i> , Hillside street to Tremont street (unfinished).		
Plankwalk built.		
Labor	\$22 37	
Lumber	55 85	
		<u>\$78 22</u>
<i>Prescott street</i> , from another part of Prescott street to Boston, Revere Beach & Lynn Railroad (work not started).		
Engineering		<u>\$103 45</u>
<i>Radcliffe street</i> , Howard street to Faxon street (work not started):		
Engineering		<u>\$15 00</u>
<i>Rexford street</i> , Blue Hill avenue to Oakland street (work not started).		
Engineering		<u>\$16 00</u>
<i>Rockledge street</i> , Lambert avenue to Thornton street (work done in 1907).		
Amount paid to Robert Eagar, under contract:		
163 cubic yards subgrading (earth excavation) @ 50c.	\$81 50	
<i>Carried forward</i>	\$81 50	

<i>Brought forward</i>	\$81 50
19 cubic yards subgrading (rock excavation) @ \$1.75	33 25
209 cubic yards filling furnished @ 75c.	156 75
878 linear feet edgestone set @ 17c.,	149 26
300 square yards granite block paving laid @ 50c.	150 00
17 square yards flagging crosswalks laid @ 60c.	10 20
637 square yards macadam surface placed @ 25c.	159 25
436 square yards brick sidewalks laid @ 25c.	109 00
2 catch-basins and manhole covers reset @ \$3	6 00
Extra work under contract:	
29.7 tons stone dust hauled one and one-half miles overhaul @ 11c. per half mile per ton	9 80
	\$865 01
Less amount paid in 1907	653 72
	<u>\$211 29</u>

Roseland street, Dorchester avenue to Samoset street (work done in 1907).

Engineering \$4 00

Samoset street, Centre street to Welles avenue. Constructed with 6-inch macadam, granite block paving laid, edgestone set and flagging crosswalks laid. Artificial stone sidewalks laid. Length, 875 feet. Area, 2,525 square yards.

Engineering and inspection	\$191 98
Teaming furnished by the city	11 25
13 feet North River flagging, furnished by the city, @ \$1.34	17 42
280 paving blocks, furnished by the city, @ \$70 per M.	19 60
1,580 paving blocks, furnished by the city, @ \$55 per M.	86 90
Advertising	58 60
Engineering expense	1 55
	\$387 30
<i>Carried forward</i>	\$387 30

<i>Brought forward</i>	\$387 30	
Less 13 feet edgestone returned @ 75c.	\$9 75	
2 small corners returned @ \$3.60	7 20	
		16 95
		\$370 35
Amount paid to D. E. Coleman Company, under contract:		
Removing trees, bushes, etc.,	\$1 00	
1,730 linear feet edgestone set @ 20c.	346 00	
541 cubic yards subgrading (earth excavation) @ 45c.,	243 45	
621 square yards granite block paving laid @ 45c.	279 45	
47 square yards flagging crosswalks laid @ 75c.	35 25	
1,898 square yards macadam surface furnished and placed @ 60c.	1,138 80	
19 square yards brick sidewalks laid @ 50c.	9 50	
8 covers reset @ \$3	24 00	
336 square yards loam furnished and placed @ 50c.	168 00	
Extra work:		
200 bricks furnished @ \$11	2 20	
7 tons surplus material overhaul two and one-half miles @ 11c. per half mile per ton	3 85	
		\$2,251 50
Less amount paid in 1907	1,000 87	
		1,250 63
Amount paid to Jeremiah J. Sullivan, under contract:		
7,648 square feet artificial stone sidewalks furnished and placed @ 17½c.	1,338 40	
		\$2,959 38

South Huntington avenue, from another part of South Huntington avenue to Huntington avenue. Constructed with 6-inch macadam, granite block paving laid, edgestone set and flagging crosswalks laid, and brick, crushed stone and artificial stone sidewalks built. Length, 1,148 feet. Area, 6,888 square yards.

Engineering and inspection	\$624 39	
84 feet 11 inches circular edgestone, furnished by the city, @ \$1.30	110 40	
80 feet North River flagging, furnished by the city, @ 66c.	52 80	
48 feet 5 inches North River flagging, furnished by the city, @ \$1.35	65 36	
91 feet 2 inches North River flagging, furnished by the city, @ \$1.34	122 16	
115,000 paving bricks, furnished by the city, @ \$11	1,265 00	
16,320 paving blocks, furnished by the city, @ \$62	1,011 84	
Advertising	54 40	
Engineering expense	8 60	
Amount paid Simpson Brothers Corporation, under contract:		
1,749 square feet artificial stone sidewalks furnished and laid @ 16.75c.	292 96	
Amount paid William J. Barry, under contract:		
Removing trees, bushes, stumps, etc.	\$0 00	
1,447 cubic yards sub grading (earth excavation) @ 40c., ...	578 80	
2,005 cubic yards filling furnished @ 75c.	1,503 75	
2,796 linear feet edgestone set @ 18c.	503 28	
1,051 square yards granite block paving laid @ 50c.	525 50	
113 square yards flagging crossings laid @ 75c.	84 75	
4,733 square yards macadam sur- face furnished and placed @ 48c.	2,271 84	
17 square yards crushed stone sidewalks furnished and placed @ \$1	17 00	
2,839 square yards brick sidewalks laid @ 28c.	794 92	
23 covers reset @ \$3	69 00	
Extra work as ordered:		
593 square yards macadam sur- face, furnished and placed on Huntington avenue to conform to grade of South Huntington avenue, @ 48c., ...	284 64	
Carried forward	\$6,633 48	\$3,607 91

<i>Brought forward</i>	\$6,633 48	\$3,607 91
2½ days, stonecutter, @ \$3.20	8 00	
Plus 15 per cent on \$8	1 20	
99.5 tons cobble stone hauled one mile overhaul, per half mile, per ton, @ 11c.	21 89	
4½ days labor, level and shape filling in Coburn street to conform to grade, @ \$2	9 25	
Plus 15 per cent on \$9.25	1 39	
5½ days labor, Telford base in Huntington avenue, @ \$2	11 00	
Plus 15 per cent on \$11	1 65	
		6,687 86
		<u>\$10,295 77</u>

Speedwell street, from Topliff street to Hamilton street (work started in 1907). Subgrading, constructed with 6-inch macadam, granite block paving laid, edgestones set, flagging crosswalks laid and artificial stone sidewalks laid, with loam spaces. Length, 735 feet. Area, 2,129 square yards.

Engineering and inspection	\$56 51	
Teaming furnished by the city	6 00	
Stone furnished by the city, 14.95 tons @ \$1.60	23 92	
Engineering expense furnished by the city	40	
Amount paid William Barrett, under contract:		
661 cubic yards subgrading (earth excavation) @ 50c.	\$330 50	
1,475 linear feet edgestone set @ 19c.	280 25	
527 square yards granite block paving laid @ 50c.	263 50	
49 square yards flagging crosswalks laid @ 75c.	36 75	
1,621 square yards macadam surface placed @ 30c.	486 30	
13 covers reset @ \$3	39 00	
<i>Carried forward</i>	\$1,436 30	\$86 83

Brought forward . . . \$1,436 30 \$86 83

Extra work — Fur-
nish, place and
seed loam for loam
spaces:

232 square yards loam,
furnished and
placed @ 50c. . . 116 00

\$1,552 30

Omission of work :

Omit hauling of
crushed stone and
screenings for
macadam:

Less 652 tons crushed
stone and screen-
ings delivered on
the line of the
work by the city
@ 30c. . . . 195 60

\$1,356 70

Less previous pay-
ments 935 85

420 85

Amount paid Warren Brothers Com-
pany, under contract:

6,575 square feet artificial
stone sidewalks
furnished and laid
@ 20c. . . . \$1,315 00

Less previous pay-
ments 544 00

771 00

\$1,278 68

Credit: 1,612 blocks @ \$55 M. . . 88 66

\$1,190 02

Stonehurst street, from Topliff street to Hamilton street (work
not started).

Engineering \$114 60

Upham avenue, from Hancock street to Cushing avenue (work
not started).

Engineering \$71 50

Walworth street, from Belgrade avenue to South street (work not started). Plankwalk built.

Labor, including engineering, furnished by the city	\$113 25	
Teaming furnished by the city	110 25	
Lumber, 3,000 feet spruce, furnished by the city, @ \$27	81 00	
Gravel, 1 single load, furnished by the city	70	
		<u>\$305 20</u>

Welles avenue, from Argyle street to Dorchester avenue (work not started).

Engineering	\$83 25	
Advertising	5 80	
		<u>\$89 05</u>

Wellesley park, from Park street to Melville avenue (work not started).

Engineering	<u>\$219 28</u>
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West Fourth street, at northwest corner of Dorchester avenue. Street widened, work done by department force.

Labor, including engineering, furnished by the city	\$281 00	
Teaming furnished by the city	54 95	
Edgestone, 38 feet 7 inches, circular, furnished by the city, @ \$1.20	46 30	
Engineering expense furnished by the city	55	
		<u>\$382 80</u>

Willowwood street, from Lauriat avenue to Norfolk street.

Subgrading, constructed with 6-inch macadam, granite block paving laid, filling furnished, edgestones set, flagging crosswalks hauled and laid and crushed stone sidewalks laid. (Work done in 1907.) Length, 1,490 feet. Area, 4,316 square yards.

Blocks furnished by the city, 2,317 @ \$55 M. \$127 44

Amount paid to Joseph J. Comfrey, under contract:

822 cubic yards subgrading (earth excavation) @ 50c.	\$411 00	
58 cubic yards subgrading (rock excavation) @ \$1.75	101 50	
		<u>\$512 50</u>

Carried forward \$512 50 \$127 44

<i>Brought forward</i>	.	.	\$512 50	\$127 44
205 cubic yards filling furnished @ \$1.25	.		256 25	
3,046 linear feet edgestone set @ 26c.	.		791 96	
1,045 square yards granite block paving laid @ 50c.	.		522 50	
3,496 square yards macadam surface placed @ 35c.			1,223 60	
2,001 square yards crushed stone sidewalks laid @ 23c.	.		460 23	
21 covers reset @ \$3	.		63 00	
Extra work — Omit brick crosswalks and substitute flagging crosswalks and haul flagging for same from South End paving yard:				
123 square yards flagging crosswalks hauled and laid @ \$1	.		123 00	
Extra work — Haul crushed stone dust from Columbia road crusher instead of from Codman street crusher:				
250 tons crushed stone dust one mile overhaul, per half mile, per ton, @ 11c.	.		55 00	
Extra work — Furnish stonecutter to dress edgestone:				
3 days, stonecutter, @ \$4.50	.		13 50	
Plus 15 per cent on \$13.50	.		2 03	
Extra work — Spread filling furnished by the city:				
3½ days labor @ \$2	.		7 00	
Plus 15 per cent on \$7	.		1 05	
<i>Carried forward</i>	.		\$4,031 62	\$127 44

<i>Brought forward</i> . . .	\$4,031 62	\$127 44	
Extra work — Rebuild three catch-basins: 3 catch-basins rebuilt @ \$5	15 00		
	\$4,046 62		
Less previous pay- ments	3,761 83		
		284 79	
			\$412 23

RECAPITULATION OF STREET WORK.

CHARGED TO APPROPRIATION FOR STREET DEPARTMENT.

<i>Albany street</i> , Randolph to Bristol street . . .	\$376 00
<i>Alford street</i> , Everett line to drawbridge . . .	2,388 79
<i>Anawan avenue</i> , Beech street to the railroad . .	1,076 79
<i>Appleton street</i> , Berkeley street to Columbus avenue	573 64
<i>Ashland street</i> , Elm to Park street	429 78
<i>Beacon street</i> , Arlington to Brimmer street . .	3,250 57
<i>Beacon street</i> , Hereford street to Massachusetts avenue	38 00
<i>Beacon street</i> , Brookline line to Cleveland circle .	2,748 28
<i>Bellevue street</i> , Robin street to the railroad . .	3,746 59
<i>Bigelow street</i> , Brooks to 60 feet beyond Dunboy street and at intersection of Charlesview street,	1,805 16
<i>Blagden street</i> , Exeter street to Huntington avenue,	646 06
<i>Blue Hill avenue</i> , Talbot avenue to Mattapan square	1,186 52
<i>Bowdoin street</i> , Hancock to Blakeville street .	623 69
<i>Braemore road</i> , Chiswick road to Commonwealth avenue	1,127 42
<i>Bristol street</i> , Albany street to Harrison avenue .	479 62
<i>Brookline avenue</i> , Boylston to Jersey street . .	138 47
<i>Brookline avenue</i> , Audubon road to Brookline line,	1,206 98
<i>Brunswick street</i> , Blue Hill avenue to Warren street,	807 38
<i>Cambridge street</i> , Sparhawk to Washington street and Harvard avenue to the railroad	653 51
<i>Centre street</i> , Roxbury	1,951 86
<i>Centre street</i> , May street to 500 feet beyond Louder's lane	1,208 24
<i>Chelsea Bridge</i>	150 02
<i>Cherokee street</i>	44 46
<i>Chestnut Hill avenue</i> , Commonwealth avenue to Brookline line	1,037 04
<i>Carried forward</i>	\$27,694 87

<i>Brought forward</i>	\$27,694 87
<i>Chestnut avenue, Paul Gore to Mozart street</i>	1,011 60
<i>Church street, High to Winter street</i>	48 00
<i>Columbia road, Boston to Dudley street</i>	2,850 92
<i>Cross street, Salem street to Haymarket square</i>	643 38
<i>D street, West Fifth to West Sixth street</i>	287 52
<i>Dorchester street, West First street to water line</i>	1,678 88
<i>Dorchester avenue, Adams to Park street</i>	185 87
<i>Dorchester avenue, Park to Ashmont street</i>	459 44
<i>Dover street, Albany street to Harrison avenue</i>	45 00
<i>Dunboy street, Faneuil to Bigelow street</i>	519 76
<i>East Cottage street, Pleasant street to Columbia road</i>	18 48
<i>East Cottage street, Dudley street to railroad bridge,</i>	1,287 15
<i>East Cottage street, Edward Everett square to railroad bridge</i>	1,933 61
<i>East Fifth street, G to H street</i>	91 03
<i>East Sixth street, O to P street</i>	221 72
<i>Esmond street, Blue Hill avenue to Bradshaw street</i>	562 09
<i>Everett street, Mill to Park street</i>	774 55
<i>Everett street, railroad bridge 650 feet south</i>	1,762 74
<i>Exeter street, Huntington avenue to Beacon street,</i>	2,731 99
<i>Fairbanks street, Washington to Faneuil street</i>	1,244 74
<i>Faneuil street, Brooks to Oakland street</i>	952 56
<i>Ferry street, North to Fulton street</i>	664 65
<i>Field street, Ruggles street to 400 feet beyond</i>	528 84
<i>Freeport street, Tenean street to the bridge</i>	3,003 97
<i>Fulton street, Cross to Clinton street</i>	1,015 26
<i>Geneva avenue, Olney street to the railroad</i>	81 52
<i>Geneva avenue, Bowdoin to Park street</i>	762 40
<i>Greenmount street, Dorchester avenue to Pleasant street</i>	52 00
<i>Hancock street, Dorchester avenue to Bowdoin street</i>	678 54
<i>Hano street, Braintree street 400 feet distant</i>	618 75
<i>Hanover street, Friend to Union street</i>	219 50
<i>Hawes street</i>	21 25
<i>High street, Church to Hancock street</i>	1,059 36
<i>Holton street, at corner Athol street</i>	189 60
<i>Howard avenue, at Cunningham street</i>	417 36
<i>Humphreys street, East Cottage to Dudley street</i>	755 35
<i>Hyde Park avenue, Tower to Washington street</i>	648 07
<i>Lagrange street, Centre street to Newton line</i>	233 22
<i>Lansing street, Warren to Sherman street</i>	312 00
<i>Linden Park street, Roxbury</i>	441 20
<i>Main street, Austin to Union street</i>	254 57
<i>Malcolm street, from Mt. Vernon street 49 feet</i>	107 40
<i>Carried forward</i>	\$59,070 71

<i>Brought forward</i>	\$59,070 71
<i>Maple street, Centre to Weld street</i>	1,681 80
<i>Marlborough street, Clarendon street to Charlesgate,</i>	903 29
<i>Massachusetts avenue, Edward Everett square to</i>	
<i>Magazine street</i>	2,660 01
<i>Massachusetts avenue, Albany to Washington</i>	
<i>street</i>	759 78
<i>Medford street, Mystic to Main street</i>	1,021 15
<i>Melcher street, Summer street 484 feet southeast,</i>	381 23
<i>Mercer street, Telegraph to East Eighth street</i>	846 36
<i>Mishawum street, Main to Rutherford avenue</i>	524 51
<i>Morton street, Canterbury to Forest Hills street</i>	2,392 46
<i>Morton street, near Blue Hill avenue</i>	452 09
<i>Moss Hill road, Pond street to Woodland road</i>	1,148 43
<i>Mount Washington avenue</i>	1,916 52
<i>Munroe street, Humboldt avenue to Warren street,</i>	1,489 92
<i>North Beacon street, Dustin street to the river and</i>	
<i>Market to Vineland street</i>	1,846 15
<i>Norway street, Hemenway street to Massachusetts</i>	
<i>avenue</i>	804 25
<i>Oakridge street, Codman to Morton street</i>	61 40
<i>Old road, Elmo to Glenway street</i>	1,627 86
<i>Olney street, Bowdoin to Everton street</i>	128 00
<i>Perkins street, South Huntington avenue to Day</i>	
<i>street</i>	509 64
<i>Peters street, East Sixth to East Seventh street</i>	608 09
<i>Pleasant street, Savin Hill avenue to Stoughton</i>	
<i>street</i>	442 10
<i>Porter street, Amory street towards Bismarck</i>	
<i>street</i>	81 50
<i>Prince street, corner Hanover street</i>	22 20
<i>Quincy street, Blue Hill avenue to Columbia road</i>	121 66
<i>Robinwood avenue, Rockview to Centre street</i>	839 19
<i>Rockview street, Spring Park avenue to Robinwood</i>	
<i>avenue</i>	418 01
<i>Rosseter street, Eldon street to 400 feet north of</i>	
<i>Bullard street</i>	1,762 91
<i>Rutherford avenue, Essex to Baldwin street</i>	260 58
<i>Ruthven street, Elm Hill avenue towards Hum-</i>	
<i>boldt avenue</i>	391 01
<i>Rutledge street, West Roxbury</i>	192 52
<i>St. Botolph street, Irvington street to Massachu-</i>	
<i>setts avenue</i>	1,763 51
<i>St. Stephen street, Massachusetts avenue to Bryant</i>	
<i>street</i>	338 96
<i>Saratoga street, East Boston</i>	581 88
<i>Savin Hill avenue, Dorchester avenue to the rail-</i>	
<i>road</i>	1,195 10
<i>Carried forward</i>	\$89,244 78

<i>Brought forward</i>	\$89,244 78
<i>South street</i> , Child street to Arborway	1,156 69
<i>Southampton street</i> , Massachusetts avenue to the bridge	1,116 44
<i>Stoughton street</i> , Pleasant street to Columbia road, <i>Summer street</i> , bridge over A street to bridge over N. Y., N. H. & H. R. R.	826 35
<i>Summer street</i> , Melcher to A street	1,500 33
<i>Summer street</i> , Melcher to A street	464 62
<i>Sutherland road</i> , Cleveland circle to Orkney road	211 46
<i>Talbot avenue</i> , Washington street to Welles avenue	848 64
<i>Terrace street</i> at Park Brewery	552 42
<i>Townsend street</i> , Washington street to Walnut avenue	1,389 30
<i>Train street</i> , Ashmont to King street	901 10
<i>Vermont street</i> , Mt. Vernon to Baker street	2,783 62
<i>Vernon street</i> , Cabot to Auburn street	1,695 98
<i>Waldeck street</i> , Melville avenue to Geneva avenue, <i>Walnut avenue</i> , 179 to 216	1,879 43
<i>Walnut park</i> , Roxbury	213 88
<i>Walnut park</i> , Roxbury	285 23
<i>Warren avenue</i> , City square to the railroad	454 05
<i>Warren avenue</i> , Berkeley street to Columbus avenue	1,892 43
<i>Warren street</i> , Pleasant to Thompson square	699 23
<i>Washington street</i> , Elmore street to West Walnut park	1,671 17
<i>Washington street</i> , Cambridge to Parsons street, north side, and Chestnut Hill avenue to Foster street, south side	1,142 96
<i>Washington street</i> , Walk Hill to Tower street	694 70
<i>Washington street</i> , Ashland to Beech street	3,116 34
<i>Wayland street</i> , 49 to 61	424 72
<i>West Canton street</i> , Appleton street to Shawmut avenue	1,651 91
<i>West Cottage street</i> , Brook avenue to Woodville street	538 11
<i>West Fifth street</i> , C to D street	833 16
<i>Western avenue</i> , Market to Telford street	228 89
<i>Worthington street</i> at Normal School	2,095 27
<i>Wrentham street</i> , Bruce to Adams street	850 95
<i>Zeigler street</i> , Harrison avenue to Washington street	240 99
	\$121,605 15

CHARGED TO SPECIAL APPROPRIATIONS.

<i>Old Colony avenue</i> , construction of	\$7,577 39
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CHARGED TO APPROPRIATION FOR STREET IMPROVEMENTS.

<i>A street</i> , Congress street to 175 feet south of Binford street	\$23,062 53
<i>Allston street</i> , Brighton to Commonwealth avenue, ...	10,080 61
<i>Ashburton place</i> , Bowdoin street 50 feet easterly	305 76
<i>B street</i> , West First to West Third street	1,021 06
<i>Batterymarch street</i> , Milk street 215 feet easterly, ...	46 76
<i>Beacon street</i> , Raleigh to St. Mary's street	8,537 40
<i>Boylston street</i> , Chestnut avenue to railroad	916 99
<i>Boynton street</i> , South to Call street	2,460 20
<i>Bromfield street</i> , Tremont to Washington street	4,149 54
<i>Bunker Hill street</i> , Main to Sackville street	1,532 33
<i>C street</i> , West Fifth across West Sixth street	51 78
<i>C street</i> , West First to West Second street	550 31
<i>Canterbury street</i> , Angell street to Blue Hill avenue	3,810 99
<i>Centre street</i> , Church to Lagrange street	3,789 24
<i>Chandler street</i> , Berkeley street to Columbus avenue	460 97
<i>Chelsea street</i> , Scott's court to Chelsea Bridge	910 80
<i>Church street</i> , Boylston to Providence street	2,147 11
<i>Clarendon street</i> , Boylston street to railroad	744 10
<i>Cleveland circle</i> , Beacon street to Chestnut Hill avenue	3,369 48
<i>Cohasset street</i> , Corinth to Albano street	5,696 01
<i>Congress street</i> , State to Water street	53 35
<i>Cooper street</i> , Washington across Endicott street	2,710 70
<i>Corning street</i> , Washington street to Shawmut avenue	2,148 56
<i>D street</i> , Gold street to West Broadway	1,836 85
<i>Dorchester avenue</i> , Ashmont to Codman street	21 13
<i>Dudley street</i> , Washington street to Eliot square, ...	1,617 43
<i>East Broadway</i> , P to Q street	1,699 64
<i>Eliot street</i> , Pleasant to Tremont street	7,374 26
<i>Fuller street</i> , Dorchester avenue to Washington street	615 63
<i>Gainsborough street</i> , Hemenway street to Hunting- ton avenue	3,307 74
<i>Gerard street</i> , Massachusetts avenue to Kemble street	8,267 01
<i>Harvard avenue</i> , Commonwealth to Brighton avenue	443 01
<i>Humboldt avenue</i> , Walnut avenue to Seaver street, ...	4,856 79
<i>Huntington avenue</i> , Tremont street to Brookline line	9,255 99
<i>Irrington street</i> , Huntington avenue to the rail- road	801 67
<i>Kilby street</i> , Milk to Central street	3,739 73
<i>Carried forward</i>	\$122,393 46

<i>Brought forward</i>	\$122,393 46
<i>Kneeland street, Washington street to Harrison avenue</i>	4,062 80
<i>Lawn street, Heath to Heath street</i>	8,195 21
<i>Lexington street, Putnam street to 250 feet beyond Prescott street</i>	2,509 67
<i>Main street, Beach to Alford street</i>	928 81
<i>Massachusetts avenue, Shirley to Gerard street</i>	1,202 16
<i>Meridian street, Maverick square to Central square</i>	7,234 28
<i>Middle street, Dorchester street to Dorchester avenue</i>	723 14
<i>Mt. Everett street, Quincy to Hamilton street</i>	335 28
<i>Neponset avenue, Adams to Ashmont street</i>	837 38
<i>New Heath street, Centre to Parker street</i>	1,432 48
<i>Oak square, Brighton</i>	2,132 35
<i>Park square, Boylston to Eliot street</i>	5,007 34
<i>Parker street, Fisher avenue to Heath street</i>	735 24
<i>Providence street, Church street 170 feet easterly,</i>	2,686 99
<i>Rutherford avenue, Baldwin to Thorndike street,</i>	2,315 82
<i>Rutherford avenue, Tibbetts Town way to Chapman street</i>	6,171 82
<i>Roxbury street, Eliot square to Columbus avenue,</i>	636 17
<i>St. James avenue, Berkeley street to Huntington avenue</i>	2,001 79
<i>Scollay square and Court street, Cornhill to Sudbury street</i>	9,456 21
<i>Shawmut avenue, Lenox to Sawyer street</i>	61 04
<i>Southampton street, railroad to Hilton street</i>	654 88
<i>Stanley street, Quincy street to Sunset circle</i>	573 26
<i>State street, north and south of Old State House (see Washington street).</i>	
<i>Sudbury street, Court street to Haymarket square,</i>	1,702 89
<i>Summer street, Washington to Hawley street</i>	3,235 45
<i>Taylor street, Neponset avenue to the railroad</i>	2,320 12
<i>Vinton street, Preble street to Dorchester avenue,</i>	791 52
<i>Walk Hill street, Blue Hill avenue to Harvard street,</i>	1,747 58
<i>Wall street, Causeway to Minot street</i>	1,156 33
<i>Walnut avenue, Circuit street to Humboldt avenue,</i>	2,936 72
<i>Ward street, Dorchester avenue to Preble street,</i>	853 21
<i>Warren street, Kearsarge avenue to Moreland street</i>	287 44
<i>Washington street, Dudley to Bartlett street</i>	1,228 90
<i>Washington street, Court avenue to Cornhill and State street, north and south of Old State House</i>	6,671 31
<i>Washington street, Blue Hill to Talbot avenue</i>	3,675 63
<i>Waumbeck street, Wabeno street to Humboldt avenue</i>	555 07
<i>Carried forward</i>	\$209,449 75

<i>Brought forward</i>	\$209,449 75
<i>West Cedar street</i> , Mt. Vernon to Chestnut street, ...	809 48
<i>West street</i> , Tremont to Washington street	5,800 43
<i>Woodward street</i> , Dorchester street to Dorchester avenue	512 75
<i>Zeigler street</i> , Washington to Warren street	2,533 79
	\$219,106 20
Less amount paid out of appropriation for Street Department	41,539 92
	<u>\$177,566 28</u>

CHARGED TO APPROPRIATION FOR HIGHWAYS, MAKING OF.

<i>Ashland street</i> , Mill to Everdean street	\$1,369 73
<i>Avenue Louis Pasteur</i> , Longwood avenue to the Fenway	1,672 65
<i>Bayswater street</i> , Saratoga street to Austin avenue, ...	755 86
<i>Belfort street</i> , Sagamore to Saxton street	23 50
<i>Bellevue street</i> , Kane to Hamilton street	3,602 27
<i>Bennington street</i> , Chelsea street to Belle Isle inlet	8 00
<i>Benton street</i> , Tremont street to Columbus avenue, ...	52 10
<i>Bernard street</i> , Talbot avenue to the railroad	6,015 86
<i>Boardman street</i> , Saratoga street to Boston & Maine Railroad	222 00
<i>Bruce street</i> , extended to Wrentham street	984 03
<i>Carmen street</i> , Shafter to Kilton street	90 25
<i>Causeway street</i> , Beverly street to Charlestown Bridge	538 54
<i>Claybourne street</i> , Dakota to Bowdoin street	205 44
<i>Clement avenue</i> , Meredith to Stratford street (credit, \$358.87)	—
<i>Corona street</i> , Bowdoin street to Geneva avenue	6,456 78
<i>Cottage street</i> , Maverick to Gove street	4,504 11
<i>Cottage terrace</i> , East Cottage to Marshfield street, ...	10 00
<i>Cotton street</i> , Walter to Fairview street	6,212 41
<i>Covington street</i> , East Eighth street to Columbia road	80 75
<i>Dakota street</i> , Greenbrier street to Geneva avenue, ...	11,041 26
<i>Dayton street</i> , Nixon street to the railroad	4 00
<i>Everdean street</i> , Green Hill to Ashland street	2,054 86
<i>Everdean street</i> , Green Hill to Preston street	3,152 11
<i>Evergreen street</i> , from South Huntington avenue, ...	836 63
<i>Farquhar street</i> , South to Selwyn street	117 25
<i>Fletcher street</i> , Centre to South street	220 00
<i>Fottler road</i> , Walk Hill street to Tileston avenue, ...	351 53
<i>Carried forward</i>	\$50,581 92

<i>Brought forward</i>	\$50,581 92
<i>Frankfort street</i> , Maverick to Gove street	4,961 66
<i>Harlem street</i> , Glenway to Greenwood street	2,113 72
<i>Hobson street</i> , Faneuil to Hobart street	108 84
<i>Kerwin street</i> , Talbot avenue to Brenard street	1 80
<i>Kilton street</i> , Harvard to Park street	1,926 12
<i>Larchmont street</i> , Waldeck to Greenbrier street, ...	7,572 75
<i>Larkin street</i> , Hampden to Adams street	1,726 14
<i>Lincoln street</i> , at junction of Cambridge street	1,049 88
<i>Mallet street</i> , Florida to Adams street	1,143 93
<i>Mapleton street</i> , Murdock to Market street	2,643 77
<i>Marmion street</i> , from Cornwall street 306 feet northeasterly	24 48
<i>Maybrook street</i> , Glenway to Greenwood street	12 00
<i>Montfern avenue</i> , Washington to Faneuil street	14 00
<i>Mountain avenue</i> , Lauriat to Ballou avenue	25 00
<i>Newcastle road</i> , Faneuil to Hobson street	85 00
<i>Norton street</i> , Bowdoin to Speedwell street	4,518 29
<i>Norwood street</i> , from Tolman street 444 feet north- easterly	2,690 23
<i>Parkview street</i> , Hutchings to Seaver street	2,021 19
<i>Pequot street</i> , Wait to Calumet street	29 00
<i>Pontiac street</i> , Hillside to Tremont street	78 22
<i>Prescott street</i> , Boston, Revere Beach & Lynn Rail- road to Prescott street	103 45
<i>Radcliffe street</i> , Harvard to Faxon street	15 00
<i>Rexford street</i> , Blue Hill avenue to Oakland street, ...	16 00
<i>Rockledge street</i> , Lambert avenue to Thornton street	211 29
<i>Roseland street</i> , Dorchester avenue to Samoset street	4 00
<i>Samoset street</i> , Centre street to Welles avenue	2,959 38
<i>Seaver street</i> , at northerly corner Walnut avenue, ...	54 10
<i>South Huntington avenue</i> , Huntington to South Huntington avenue	10,295 77
<i>Speedwell street</i> , Topliff to Hamilton street	1,190 02
<i>Stonehurst street</i> , Topliff to Hamilton street	114 60
<i>Upham avenue</i> , Hancock street to Cushing avenue, ...	71 50
<i>Walworth street</i> , Belgrade avenue to South street, ...	305 20
<i>Welles avenue</i> , Argyle street to Dorchester avenue, ...	89 05
<i>Wellesley park</i> , Park street to Melville avenue	219 28
<i>West Fourth street</i> , northwest corner Dorchester avenue	382 80
<i>Willowwood street</i> , Lauriat avenue to Norfolk street	412 23
	\$99,771 61
Less credit on Clement avenue	358 87
	\$99,412 74

STREET DEPARTMENT—PAVING DIVISION
Maintenance of Macadam Streets.

Schedule of Amounts Resurfaced and Cost of Same for Year ending January 31, 1909.

	1905.	1906.	1907.	1908.
Length of macadam in miles	337.10	341.22	346.02	348.62
Total area of macadam in square yards	6,155,668	6,269,208	6,348,389	6,406,246
Total cost of maintenance of macadam *	\$673,884 55	\$700,401 56	\$480,607 27	\$340,822 36
Cost per mile over entire mileage	\$2,000 00	\$2,041 00	\$1,389 00	\$977 62
Cost per square yard over entire area *	\$0 11	\$0 11	\$0.08	\$0.053
Length of macadam resurfaced yearly in miles	32.3	27.6	20.9	22.2
Cost per mile of macadam resurfaced yearly	\$18,300 00	\$22,017 00	\$17,742 00	\$11,705 13
Area of macadam resurfaced yearly in square yards	552,146	507,689	392,670	406,438
Cost per square yard of resurfacing over yearly area	\$1 07	\$1 19	\$0 95	\$0.639
Cost per square yard of street cleaning over entire macadam area	\$0.0135	\$0.0148	\$0.0173	\$0.01264
Percentage of maintenance and street improvements appropriations used for maintenance of macadam *	41%	43.9%	36.5%	33.7%

* Including street cleaning by Paving Division.

New Edgestones. (Not including " 323 " and " 393 " streets.)

First Setting. Linear Feet.

YEAR.	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester.	Roxbury.	City Proper.	Totals.
1900.....	729	616	100	.....	614	9,633	8,882	1,544	22,118
1901.....	1,925	1,184	.....	4,627	7,936	22,574	13,942	2,480	54,668
1902.....	1,957	1,121	.....	688	990	10,428	3,842	2,082	21,108
1903.....	1,578	1,581	.....	5,838	912	10,959	10,164	4,131	35,163
1904.....	1,391	1,124	569	457	2,677	3,912	3,661	2,092	15,883
1905.....	2,049	1,494	.....	1,867	6,056	13,548	1,814	4,705	31,533
1906.....	2,078	628	.....	261	4,203	15,119	2,307	.....	24,596
1907.....	414	1,263	250	908	349	4,781	1,663	534	10,162
1908.....	656	798	.....	2,405	2,399	3,654	4,811	813	15,236
Totals....	12,777	9,809	919	17,051	26,136	94,608	50,786	18,381	230,467

New Brick Sidewalks. (Not including " 323 " and " 393 " Streets.)

First Laying. Square Yards.

YEAR.	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester.	Roxbury.	City Proper.	Totals.
1900.....	1,069	1,476	477	873	1,583	4,033	4,999	2,858	17,368
1901.....	4,617	1,142	323	100	3,825	5,613	4,920	549	21,089
1902.....	1,319	1,425	.....	288	342	2,537	1,668	190	7,769
1903.....	1,161	635	.....	.....	182	700	2,342	186	5,206
1904.....	1,529	817	429	940	432	1,915	2,136	923	9,121
1905.....	1,186	1,980	.....	202	103	4,140	790	400	8,801
1906.....	934	699	.....	106	278	1,758	899	.....	4,674
1907.....	455	1,157	223	250	400	856	296	328	3,965
1908.....	217	836	.....	.....	156	958	884	313	3,364
Totals....	12,487	10,167	1,452	2,759	7,301	22,510	18,934	5,747	81,357

	Edgestones. <i>Linear Feet.</i>	Brick. <i>Square Yards.</i>
South Boston Paving District, No. 1.....	656	217
East Boston Paving District, No. 2.....	798	836
Brighton Paving District, No. 4.....	2,405	.....
West Roxbury Paving District, Nos. 5 and 11,	2,399	156
Dorchester Paving District, Nos. 6 and 12...	3,654	958
Roxbury Paving District, No. 7.....	4,511	884
City Proper Paving District, Nos. 8, 9, 10....	813	313
Totals.....	15,236	3,364

**Loads of Dirt and Street Cleanings Removed from February 1,
1908, to January 31, 1909.**

By Paving Division.

DISTRICTS.	Single.	Double.	Cubic Yards.
South Boston	959	.....	959
East Boston.....	214	232	678
Charlestown.....	186	.....	186
Brighton.....	2,828	2,431	7,690
West Roxbury.....	7,773	1,962	11,692
Dorchester.....	3,304	714	4,732
Roxbury.....	3,761	.....	3,761
South End.....	3,480	486	4,452
Back Bay.....	1,567	305	2,177
North End.....	320	.....	320
Ashmont.....	2,505	1,492	5,489
Totals.....	26,897	7,622	42,136

**Loads of Snow Removed from February 1, 1908, to January 31,
1909.**

By Paving Division.

DISTRICTS.	Single.	Double.	Cubic Yards.
South Boston.....	568	51	670
East Boston.....	6	5	16
Charlestown.....	112	11	134
Brighton.....	39	35	109
West Roxbury.....	282	299	880
Dorchester.....	92	54	200
Roxbury.....	270	.....	270
South End.....	1,283	52	1,387
Back Bay.....	42	150	342
North End.....	900	25	950
Ashmont.....	34	137	308
Totals.....	3,628	819	5,266

By Contract.

Snow District No. 1.....	.....	953	2,929
Snow District No. 2.....	.....	603	1,811
Snow District No. 3.....	.....	686	2,040
Snow District No. 4.....	.....	588	1,761
Snow District No. 5.....	.....	130	385
Totals.....	.....	2,960	8,926

By Street Cleaning Division.

South Boston.....	2,288	.....	3,763
East Boston.....	3,430	220	6,737
Charlestown.....	2,388	.....	4,199
Dorchester.....	98	.....	196
Roxbury.....	1,460	.....	2,642
South End.....	12,485	226	22,785
Back Bay.....	3,292	.....	5,912
North End.....	7,644	.....	12,806
Patrol System.....	4,456	.....	7,825
Totals.....	37,541	446	66,865
Grand totals.....	41,169	4,225	81,057

Crushed Stone.*Output of Stone from City Crushers and Cost of Operating and Maintaining.*

	Crushed Stone. Tons.	Cost of Operating and Maintenance for Fiscal Year.	Cost of Operating and Maintenance for Calendar Year.
Centre street crusher	167	\$2,791 82	\$2,374 77
Chestnut Hill avenue crusher	9,448	20,277 20	13,567 40
Codman street crusher	1,359	3,216 91	2,967 03
Columbia road crusher	984	15,154 84	7,566 75
Dimock street crusher	4,300	10,934 39	9,137 25
Rosseter street crusher	1,394	5,950 38	4,585 69
Grove street crusher		1,211 50	924 50
Bleiler crusher		1,108 36	1,105 28
Kenney crusher		3,072 60	2,657 14
Totals	17,652	\$63,718 00	\$44,885 81

STREET OPENINGS.

Permits for making openings in the public streets have been issued from the Permit Office during the year ending January 31, 1909, as follows:

	Permits.	Feet.
Auxiliary Fire Alarm Company	1	75
Boston Fire Department	30	1,099
Boston Lamp Division	112	1,740
Boston Park Department	1	60
Boston Police Department	12	482
Boston Sewer Division	282	17,659
Boston Transit Commission	5	121
Boston Water Department	3,392	82,993
Boston Consolidated Gas Company	1,965	99,351
Boston Elevated Railway Company	175	331,283
Boston Low Tension Wire Association	13	3,651
Boston Pneumatic Transit Company	10	120
Boston, Revere Beach & Lynn Railroad Company ..	3	85
Boston & Albany Railroad Company	1	100
Boston & Maine Railroad Company	6	274
Charlestown Gas and Electric Company	96	3,380
Coleman Brothers Company	1	50
Columbia Counter Company	2	24
East Boston Gas Company	302	25,258
Eastern Cold Storage Company	3	76
Edison Electric Illuminating Company	1,371	55,397
Hind, Thomas J.	50	4,663
Lynn & Boston Railroad Company	6	13,186
Carried forward	7,839	641,127

STREET OPENINGS.—*Concluded.*

	Permits.	Feet.
<i>Brought forward</i>	7,839	641,127
Metropolitan Water and Sewerage Board.....	1	15
Murtfeldt, W. A., Company.....	129	9,178
New England Telephone and Telegraph Company..	183	11,292
New York, New Haven & Hartford Railroad Co....	6	274
Old Colony Street Railway Company.....	2	1,901
Postal Telegraph Cable Company.....	2	55
Quincy Market Cold Storage Company.....	34	718
Schoolhouse Commissioners.....	4	1,180
Simpson Brothers Corporation.....	69	6,756
Standard Oil Company.....	9	79
Union Freight Railway Company.....	2	105
Warren Brothers Company.....	47	4,917
Western Union Telegraph Company.....	11	821
Miscellaneous.....	2,556	139,696
Emergency, Class A.....	1,177	.....
Emergency, Class A, returned as used 868, estimated length.....	.....	21,700
Totals.....	12,071	839,814

Making a total length of openings about 159.053 miles.

Permits other than for street openings have been issued as follows:

Advertising by man wearing hat and coat lettered .	19
Cleaning snow from roofs	121
Driving cattle	25
Dumping snow in public alleys	45
Erecting and repairing awnings	3,617
Erecting and repairing buildings	7,487
Emergency permits, Class B	606
Feeding horses on streets	1,671
Loading and unloading goods	50
Moving buildings	5
Painting signs or notices on obstruction fences	7
Placing signs flat on buildings	2,872
Projecting signs and lamps	147
Raising and lowering safes, machinery, etc.	434
Special permits for other purposes	155
Extensions of permits already issued	588
Totals as above	17,829
Totals for street openings	12,071
Totals for all permits	29,900

BONDS FOR PERMITS.

There are on file in the Permit Office 1,458 one thousand (1,000) dollar bonds which are guaranteed by some one of the surety companies authorized to do business in the State of Massachusetts. There are sixty-one (61) twenty thousand (20,000) dollar bonds on file in the office of the City Auditor under which permits are granted by the Permit Office.

COAL VAULTS OR AREAS BENEATH SIDEWALKS.

There have been twenty (20) permits issued for the construction of areas and coal vaults during the year, as per order of the Board of Aldermen.

There have been sixteen (16) permits issued for sidewalk covers of various kinds over areas.

EMERGENCY PERMITS.

The system of handling emergency permits—the purpose of which is to allow the interested parties to do work, in the night or at times when it is impossible for them to obtain regular permits, necessary for the safety of life and property—has been improved from year to year and is now in very good shape.

Some difficulty has been experienced by the district foremen in locating openings made by corporations owning underground structures, at street intersections, and in the event of several openings having been made in locating a leak on one permit. This has been obviated by requiring the corporations to give exact locations, by means of ties to permanent bounds in the case of street intersections, and by securing the exact location of each hole made in locating a leak.

NOTICES.

There have been 14,628 notices sent to district foremen, corporations, departments and private individuals, directing them to make repairs to defects in the public streets.

There have been 318 notices sent to departments and corporations to perform work under the direction of the Chief Engineer of this department.

Each morning a statement is forwarded to each district foreman giving the locations of all openings for which permits were issued during the previous day.

An inspector is assigned to oversee the construction of all artificial sidewalks, and another is detailed to the examination of places where defects are alleged to exist which have caused accidents.

The inspectors detailed to serve with the corporations making openings in the streets send a daily report to the Permit Office of all openings and backfillings inspected during the previous twenty-four hours. The salaries of these men are met by the corporations whose work they inspect.

ELECTRIC POLES.

Permits have been issued during the year for the placing of forty-two (42) new poles as per plans on file in the Permit Office and in accordance with orders of the Board of Aldermen.

Permits have been issued for the resetting of one thousand two hundred and seven (1,207) poles which were defective or dangerous.

Permits have been issued for the removal of three hundred and eighteen (318) poles as per order of the Board of Aldermen and Wire Commissioner.

PLANS.

Plans of electric pole locations and locations for electric conduits, gas mains, railway tracks and a large number of miscellaneous matters, such as steam pipes, areas, etc., are kept on file and indexed as follows:

Bridge grades	10
Conduit plans	3,780
Elevated structural plans	125
Pole plans	5,183
Street numbering plans	1,547
Track plans	2,017
Miscellaneous plans	471
Total plans on file	13,213

SIDEWALK DEFECTS.

During nine months of this year two inspectors have been examining the sidewalks of the public streets for defects liable to cause accidents to pedestrians. Their inspection covered open areas needing guard rails; area covers smooth or with bull's-eyes out; bulkhead covers and edges; coal-hole

covers, rims or stones smooth or otherwise defective; depressions and stub-toes of various kinds, etc.

The inspectors made 14,741 inspections and under chapter 38, sections 12, 18 and 19, and chapter 47, section 54, of the Revised Ordinances of 1898, and chapter 5, section 3, of the Revised Regulations of 1898; they found 4,156 defective properties.

Notices to the number of 3,756 were mailed to the owners or lessees of the property at which each defect was found and in addition 400 verbal notices were given by the inspectors to the interested parties at the time of inspection. Subsequent inspection shows that in 2,900 cases satisfactory repairs were made and in 1,256 cases they are yet to be made.

During the past two months the work of these inspectors has been so arranged that in each defect reported it becomes the duty of the inspector to follow up the responsible party until repairs are effected.

As a rule more than one defect was reported on each notice, thus making it apparent that at the lowest estimate the inspection has resulted in the repair of 4,000 defects. Probably there have not been such a number of sidewalk defects removed in an equal period during any ten previous years in the history of the city.

STREET NUMBERING.

	Whole Streets Num- bered.	Whole Streets Renum- bered.	Part Streets Num- bered.	Part Streets Renum- bered.	Estates Num- bered.	Estates Changed.	Metallic Figures Supplied.
East Boston.....		1	3	4	105	47	402
Charlestown.....		3	1	.....	16	59	152
City Proper.....	1	14	1	7	111	161	630
South Boston.....					68	4	249
Dorchester.....	3	3	15	2	684	49	2,027
Roxbury.....		2	2	1	127	21	389
West Roxbury....			2	2	154	13	475
Brighton.....	1	.....	2	1	112	15	326
Totals.....	5	23	26	17	1,377	369	4,650

TABLE SHOWING THE COST OF ASPHALT REPAIRS PER SQUARE YARD OF STREET SURFACE
FROM 1900 TO 1908, INCLUSIVE.

Trinidad Asphalt.

City Proper.

STREET.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Albany street.....	1899	.....	.....	.....	.....	*	.....	.....	\$0.009	.....
Albany street.....	1884	\$0.117	\$0.029	\$0.019	\$0.090	\$0.029	\$0.082	\$0.055	.086	\$0.124
Arch street.....	1893	.075	.....	.065	.069	.091	.057	.062	‡.082	.....
Arch street.....	1893	.....	.....	.....	.....	.....	.....	.....	.....	.329
Ash street.....	1887	.028	.128	.064	.018	.033	†	.....	.....	.....
Barton court.....	1894	.222	.113	.....	.....	†	.....	.....	.....	.....
Batterymarch street...	1896	.....	*	.....	.....	.247	.004	.008	.070	.030
Beacon street.....	1891	.086	.075	.024	.047	.043	.048	.049	.107	‡.062
Beacon street.....	1891	.....	.....	.....	.....	.....	.....	.....	.....	.109
Beacon street.....	1892	.127	.049	.020	.033	.060	.013	.036	.063	.084
Beacon street.....	1898	.....	.....	.....	*	.004	.006	.014	.....	.010
Beacon street.....	1893	.116	.105	.016	.056	.011	.093	.028	‡.001	.....
Beacon street.....	1893	.....	.....	.....	.....	.....	.....	.....	.....	.042
Beaenet street.....	1887	.043	.065	.030	.162	.019	†	.....	.....	.....

Cost of Trinidad Asphalt Repairs, 1900=1908.—Continued.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Cooper street.....	North Margin street, across Endicott street..	1887	\$0.064	\$0.076	\$0.030	\$0.152	\$0.128	\$0.051	\$0.123	\$0.340	\$0.339
Cooper street.....	Endicott street to Washington Street North,	1897	.....	.....	*	.189	.065	.158	.226	.....	†
Corning street.....	Washington street to Shawmut avenue.....	1883-96	.....	*	.235	.237	.056	.204	.202	.487	†.061
Court street.....	Washington street to Court square	1891-1904	.121	.238	.334	.027	†	.....	.....	.....	.....
Court square.....	Court street to Court street.....	1881	.021	.178	.034	.063	†.115	.....	.....	.....	.....
Court square.....	Easterly and southerly side.....	1881-94	.031	.176	.074	.118	.171	.107	.036	.097	.191
Dartmouth street.....	Boylston street to Newbury street.....	1894	.039	.....	.007	\$.089	.....	.....	.....	.026	.067
Dartmouth street.....	Buckingham street to 127 feet south of Stuart street.....	1899	.....	.....	.....	.....	.....	*	.019	.....	.....
Davis street.....	Washington street to Harrison avenue.....	1892	.015	.....	.054	.072	.010	.082	.060	.081	.100
Doane street.....	Kilby street to Broad street.....	1881	.040	.032	.080	.198	.103	.043	.....	.058	.307
Edinboro street.....	Essex street to Beach street.....	1895	.....	.....	.010	.089	.021	.113	.086	.061	.068
Exchange place.....	Congress street to Kilby street.....	1887	.026	.123	.036	†	.....	.....	.....	.....	.....
Ferdinand street.....	At Castle square.....	1889	.....	.....	.....	.....	*	.....	.....	.....	.....
Groton street.....	Washington street to Shawmut avenue.....	1892	.032	.....	.040	.045	.028	.....	.031	.022	.045
Hanover avenue.....	Hanover street to North street.....	1892	.060	.....	.016	.301	.006	.060	.059	.028	.237
Harrison avenue.....	East Newton street to East Springfield st...	1888-95	.090	.043	.080	.118	.017	.068	.115	.221	.369
Harrison avenue.....	East Springfield street to 90 feet southerly...	1888	.....	...043	.080	.118	.017	.....	.....	.195	.880
Hollis street.....	Tremont street, towards Washington street..	1891	.031	.130	.036	.164	.150	.051	.071	.173	.092

Hudson street.....	1891	.155	.046	.064	.101	.037	.068	.132	.149	.175
Kilby street.....	1881	.006	.037	.038	.028					
Kilby street.....	1881-98				*	.030	.056	.224	.149	\$.010
Laconia street.....	1896		*	.042	.083		.027	.054	.056	.157
La Grange street.....	1897			*		.100	.068	.132	.110	.180
Lincoln place.....	1897			*				.024		.037
Malcolm street.....	1892			.010	.019		.065		.101	.128
Massachusetts avenue..	1892	.045	.053	.033	.058	.031	.034	.019	.073	.088
Massachusetts avenue..	1892	.045	.053	.033	.058	.031	.017	.015	.019	.063
Massachusetts avenue..	1892	.045	.053	.033	.058	.031	.013	.048	.043	.200
Moon street.....	1891	.034	.017	.010	.098		.060	.096	.035	.150
North Bennet street...	1883	.140	.127	.132	.044	†				
North Margin street...	1895			.015	.097	.015	.029	.032	.008	.114
Oxford street.....	1895		.010		.048	.006	.096	.049	.076	.159
Parkman street.....	1898				*			.007	.034	.020
Parmenter street.....	1893	.184		†						
Pinckney street.....	1895			.002	.113	.032	.015	.089	.096	.248
Pine street.....	1896		*		.052		.081	.015	.032	.037
Pleasant street.....	1900						*	.648	1.717	.314
Poplar street.....	1887-92	.097	.068	.054	.128	.032	.057	.050	.101	.217

* Guarantee expired in this year.

† Repaved in this year.

‡ Westerly side repaved in this year.

§ Part repaved in this year.

Corey street.....	1897	.....	.....	*	.....	.....	.....	.042	.....	.236	.238
Moulton street.....	1897	.....	.....	*	.....	.....	.....	.....	.....	.....	.025
Moulton street.....	1897	.....	.....	*	.....	.....	.....	.012	.039	.....	.007
Tufts street.....	1897	.....	.....	*	.....	.....	.....	.....	.....	.038	.070
Vine street.....	1897	.....	.....	*	.....	.....	.....	.....	.....	.....	.031

South Boston.

D street.....	1889	\$0.016	\$0.048	\$0.056	\$0.221	\$0.032	\$0.051	\$0.165	\$0.137	\$0.302
E street.....	1892	.....	.....	.....	.....	.053	.035	.026	.....	.213
Rogers street.....	1891	.....	.....	.....	.047	.....	.....	.....	.....	.074
West Sixth street....	1887	.019	.....	.154	.178	.032	.073	.....	.....	.....
West Third street....	1892	.....	.....	.031	.....	.054	.....	.032	.027	.117

Roxbury.

Cabot street.....	1891	\$0.046	\$0.022	\$0.027	\$0.023	\$0.002	\$0.019	\$0.025	\$0.069	\$0.078
Cabot street.....	1892	.012	.....	.010	.012	.006	.020	.034	.....	.100
Cabot street.....	1897	.....	.....	*	.....	.001	.....	.008	.013	.161
Columbus avenue.....	1896	.....	*	.020	.037	.123	.060	†	.....	.....

* Guarantee expired in this year.

† Repaved in this year.

Cost of Sicilian Rock Asphalt Repairs, 1900-1908.
City Proper.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Acton street.....	Washington street to Bradford street.....	1896	.....	*	\$0.054	.....	\$0.008	\$0.010	\$0.051	\$0.018	\$0.129
Albany street.....	Easterly side of Stoughton street, across East Concord street.....	1897	.....	.....	*	\$0.185	.205	†.048	.....	.....	.....
Ash street.....	Oak street, across Nassau street.....	1895	\$0.115	.....	.196	.....	.183	.029	.....	.070	.....
Avery street.....	Washington street to Mason street.....	1897	.....	.....	*	.175	.....	‡	.099	.....	.096
Barton street.....	Leverett street to Milton street.....	1895	.....	\$0.101	.015	.....	.052	.019	.035	.035	.101
Bradford street.....	Waltham street to Shawmut avenue.....	1897	.....	.....	*	.....	.021	.001	.011	.018	.010
Cobb street.....	Washington street to Shawmut avenue.....	1897	.....	.....	*	.....	.....	.042	.019	.006	.008
Decatur street.....	Washington street to Harrison avenue.....	1892	.080	.....	.098	.174	.052	.126	.119	.187	.460
Dwight street.....	Shawmut avenue to Tremont street.....	1893	.015	.....	.030	.....	.013	.022	.005	.041	.005
Exeter place.....	Chauncy street to Harrison avenue.....	1897	.....	.....	*	.....	.....	.046	.032	.105	.008
Fabin street.....	Newland street to Ivanhoe street.....	1895	.....	.....	.....	.....	.....	.067	.....	.....	.008
Fay street.....	Dover street to Harrison avenue.....	1894	.....	.....	.099	.296	.048	.....	.014	.020	.084
Hamburg street.....	Mystic street to Harrison avenue.....	1896	.....	.....	.....	.035	.022	.006	.023	.020	.010
Hanover street.....	Tileston street, across Charter street.....	1896	.....	.....	.105	.179	.065	.144	.146	.122	.234
Huntington avenue....	Boston & Albany Railroad to Massachusetts avenue.....	1896	.....	*	.008	.013	.012	.017	.015	.035	.039

Mason street	From 213 feet south of West street to 444 feet south of West street.....	1894	.191	.300	.099	.533	.198	.256	.325	†	.....
Massachusetts avenue.	Washington street to Harrison avenue (southerly roadway).....	1894	.010	.....	.014	.019	.011	.013	.035	.002	.029
Massachusetts avenue.	Harrison avenue to Albany street (southerly roadway).....	1894	.010	.....	.014	.019	.011	.034	.003	.010	.055
Mayo street.....	Castle street to Cobb street.....	1897	.....	.....	*	.....	.....	.065	.011	.....	.....
Meander street.....	East Dedham street to Malden street.....	1896	.....	*	.182	.014	.....	.002	.....	.....	.015
Motte street.....	Washington street to Harrison avenue.....	1892-99	.....	.161	.....	.....	.025	.....	.....	.147	.065
Mystic street.....	Malden street to East Brookline street.....	1896	.....	*	.....	.046	.012	.036	.016	.015	.027
North Margin street...	Thacher street, towards Endicott street.....	1897	.....	.....	*	.095	.027	.095	.015	.077	.105
Norwich street.....	Mystic street to Meander street.....	1896	.....	*	.....	.027	.....	.029	.015	.....	.014
Ohio street.....	Washington street to Shawmut avenue.....	1896	.....	*	.043	.....	.077	.040	.021	.030	.088
Pemberton square.....	Front of Suffolk Courthouse.....	1894	.....	.....	.....	.....	.030	.008	.012	.002	.013
Prince street.....	Hanover street to Bennet avenue.....	1895	.....	.....	.....	.052	.190	.007	.035	.038	.073
Shawmut avenue.....	132 feet south of Castle st., across Cherry st.	1898	.....	.....	.....	*	.057	.069	.081	.150	.198
Taylor street.....	Dwight street to Milford street.....	1896	.....	*	.014	.....	.....	.048	.020	.....	.020
Whitmore street.....	Kneeland street to Harvard street.....	1895	.....	.....	.023	.....	.....	.063	.030	.....	.026

* Guarantee expired in this year.
† Repaved with bitulithic in this year.
‡ From Washington street to 79 feet west of Haymarket place repaved with granite blocks in this year.

Cost of Sicilian Rock Asphalt Repairs, 1900-1908.— *Concluded.*
South Boston.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Athens street.....	West Second street to A street.....	1895	.....	.....	.....	.....	.....	\$0.019	.....	\$0.009	.....
Athens street.....	B street to C street.....	1892	.....	.....	.....	.....	.....	.028	\$0.013	.010	.....
East Broadway.....	Front of Lincoln School.....	1897	.....	.....	*	\$0.035	\$0.056	.110	.062	.048	\$0.052
K street.....	East Sixth street to East Eighth street.....	1896	.....	*	\$0.084	.129	.054	.048	.060	.106	.056
West Broadway.....	From 196 feet east of easterly line of Dorchester avenue to A street.....	1892	\$0.213	.....	.260	.110	.066	.183	.153	.200	.274
West Broadway.....	Gardner place to 150 feet easterly.....	1893	.060	\$0.229	.344	.125	.122	.152	.195	.246	.440
West Broadway.....	New England Bridge to E street (4-foot gutters).....	1897	.....	.....	*	.092	.121	.209	.159	.107	.154
West Broadway.....	150 feet west of F street to 267 feet east of F street.....	1897	.....	.....	*	.....	.030	.112	.022	.023	.133
West Broadway.....	267 feet east of F street to 44 feet west of Dorchester street.....	1898	.....	.....	.....	*	.031	.062	.019	.029	.037

Roxbury.

Columbus avenue.....	Terry street to 61 feet north of Station st...	1896	.....	*	\$0.167	\$0.192	\$0.104	\$0.189	†	†	.....
Huntington avenue....	Easterly side of Cumberland street to Massachusetts avenue.....	1896	.....	*	.008	.013	.012	.....	.....	.....	.....
Huntington avenue....	Massachusetts avenue to Gainsborough st...	1896	.....	*	.....	.013	.012	.019	\$0.003	\$0.013	\$0.038
Ipswich street.....	Bridge over waterway.....	1898	.....	.....	.....	*	.....	.102	.....	.....	.....

* Guarantee expired in this year.

† Repaved in this year.

Cost of Seyssel Rock Asphalt Repairs, 1900=1908.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Genesee street.....	Harrison avenue to Albany street.....	1899	.....	.....	.....	.....	*	\$0.039	\$0.007	\$0.016	\$0.010
Mason street.....	444 feet south of West street to Avery st....	1899	.....	.....	.....	.....	*	.....	.045	.097	.086
Oswego street.....	Harrison avenue to Albany street.....	1899	.....	.....	.....	.....	*	.006	.008	.009	.022
Paul street.....	Emerald street to Village street.....	1897-99	.....	.....	*	.....	.....	.....	.....	.023	.077
Paul street.....	Village street to Tremont street.....	1897-99	.....	.....	*	.....	.....	.015	.....	.028	.094
Pelham street.....	Washington street to Shawmut avenue.....	1897	.....	.....	*	.....	\$0.091	.....	.016	.013	.042
Waterford street.....	Washington street to Shawmut avenue.....	1897	.....	.....	*	.....	.149	.021	.089	.085	.093

Other Asphalt.

STREET.	Limits.	Year Laid.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Harris street.....	Hanover street to North street (coal tar)....	.....	\$0.051	.....	\$0.076	.....	†	.....	.....	.....	.....
I street.....	East Broadway to East Fourth st. (coal tar).	.....	.264	.....	.108	\$0.282	.....	\$0.180	\$0.049	\$0.052	\$0.108
Massachusetts avenue..	Columbus avenue to Tremont street north- erly roadway (asphaltina).....	1897	.....	.....	*	.092	\$0.104	.093	.151	‡	.....
Mt. Vernon street.....	Archway under State House (Limmer rock asphalt).....	1897	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Guarantee expired in this year.

† Repaved with Trinidad in this year.

‡ Repaved with bitulithic in this year.

LIST OF STREETS PAVED WITH TRINIDAD ASPHALT, JANUARY 31, 1909.
City Proper.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Albany street.....	80 feet north of Broadway, across Way street.....	105	397	1899	
Albany street.....	East Concord street to 225 feet north of Massachusetts avenue.....	446	2,676	1884	
Andrews street.....	East Dedham street to East Canton street.....	216	312	1899	Oct. 22, 1909.
Arch street.....	Milk street to 200 feet south of Milk street.....	200	580	1907	July 27, 1917.
Arch street.....	200 feet south of Milk street to Franklin street.....	226	687	1893	
Arlington street.....	Boylston street to Beacon street.....	1,324	7,355	1901	June 16, 1911.
Ash street.....	Bennet street to Nassau street.....	232	452	1905	Oct. 5, 1915.
Avon street.....	Washington street to Chauncy street.....	428	1,061	1901	Oct. 29, 1911.
Barton court.....	Barton street to Brighton street.....	134	182	1904	Sept. 7, 1914.
Batterymarch street.....	Milk street to Liberty square.....	150	466	1896	
Beacon street.....	Charles street to southerly side of Brimmer street.....	508	2,288	1891	
Beacon street.....	Charles street, across Arlington street, southerly roadway.....	.....	2,171	1901	June 29, 1911.
Beacon street.....	Easterly side of Dartmouth street to within 150 feet of the westerly line of Gloucester street.....	1,733	9,219	1892	
Beacon street.....	150 feet east of the westerly line of Gloucester street to 78 feet beyond the westerly line of Gloucester street.....	228	1,236	1898	
Beacon street.....	78 feet west of Gloucester street to Hereford street.....	316	1,641	1893	
Beacon street.....	Hereford street to Massachusetts avenue.....	706	3,766	1907	Sept. 16, 1917.

Bennet street.....	Ash street to Harrison avenue.....	248	469	1905	Aug. 18, 1915.
Berkeley street.....	Boylston street to St. James avenue.....	273	678	1902	Aug. 4, 1912.
Berkeley street.....	Easterly roadway, Boylston street to Providence street.....	.....	329	1906	Dec. 31, 1916.
Berwick park.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Bond street.....	Hanson street to Milford street.....	192	426	1895	.....
Bosworth street.....	At Tremont street.....	13	28	1900	Dec. 2, 1910.
Boylston street.....	Tremont street, across Boylston place.....	357	1,395	1901	Oct. 9, 1911.
Boylston street.....	Charles street to Arlington street.....	868	4,792	1901	Oct. 9, 1911.
Boylston street.....	Easterly side of Berkeley street, across Clarendon street, southerly side..	656	1,285	1897	.....
Boylston street.....	Easterly side of Berkeley street, across Clarendon street, northerly side..	.....	1,379	1907	June 10, 1917.
Boylston street.....	Clarendon street, across Dartmouth street.....	649	2,332	1901	Oct. 23, 1911.
Brattle square.....	Brattle street to Elm street.....	281	670	1888	.....
Brighton street.....	Leverett street to Allen street (cobble base).....	845	1,865	1892	.....
Brimmer street.....	Beacon street to the center of Byron street.....	116	322	1895	.....
Brimmer street.....	Center of Byron street to Chestnut street.....	180	536	1906	Nov. 10, 1916.
Brimmer street.....	Chestnut street to Pinckney street.....	791	2,442	1895	.....
Broadway.....	Albany street to 105 feet west of Albany street.....	105	467	1899	.....
Bromfield street.....	At Tremont street.....	12	31	1900	Dec. 2, 1910.
Castle street.....	Castle square, easterly.....	.....	427	1899	.....
Cazenove street.....	Columbus avenue to 45 feet south of Columbus avenue, also intersection of Columbus avenue.....	45	134	1899	.....
Central street.....	Broad street to Kilby street.....	313	869	1887	.....
Chambers street.....	Green street, across Poplar street.....	460	1,022	1902	Oct. 25, 1912.

List of Streets Paved with Trinidad Asphalt.— *Continued.*

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Chambers street.....	Brighton street, across Auburn street.....	152	337	1895	
Chambers street.....	Auburn street to Charles street (cobble base).....	120	267	1895	
Chandler street.....	At Castle square.....		51	1899	
Charles street.....	Southerly side of Fruit street, across Allen street.....	706	1,804	1899	Oct. 31, 1909.
Charter street.....	Hanover street, across Unity street (cobble base).....	304	586	1894	
Cherry street.....	Washington street to Shawmut avenue.....	334	594	1892	
Claremont park.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Clark street.....	Hanover street to North street (cobble base).....	301	579	1892	
Columbus avenue.....	134 feet south of Ferdinand street to Boston & Albany R. R. Bridge.....	912	3,570	1904	Nov. 25, 1914.
Columbus avenue.....	Boston & Albany R. R. Bridge to northerly side of Camden street.....	4,083	15,742	1907	Jan. 8, 1917.
Concord square.....	At Columbus avenue (crosswalk).....	9	41	1907	Jan. 8, 1917.
Congress square.....	From Congress square to Congress street.....	209	400	1900	
Cooper street.....	North Margin street to Endicott street.....	163	504	1887	
Cooper street.....	East side of Endicott street to Washington Street North.....	241	709	1908	Sept. 16, 1918.
Court street.....	Washington street to westerly side of Old Court House.....	296	823	1904	July 6, 1914.
Court square.....	From Court street to 20 feet south on the easterly side.....	20	50	1904	July 6, 1914.
Court square.....	From 20 feet south of Court street on the easterly and southerly sides to the westerly side.....	348	1,050	1894	
Court square.....	From Court street 291 feet on the westerly side of the Old Court House,	291	703	1904	Sept. 26, 1914.

Dartmouth street.....	101	280	1899	Buckingham street to 127 feet south of Stuart street.....	1899	
Dartmouth street.....	234	1,890	1901	Huntington avenue to Boylston street.....	1901	Oct. 23, 1911.
Dartmouth street.....	257	1,600	1894	Boylston street to Newbury street.....	1894	
Dartmouth street.....		400	1903	Boylston street to Newbury street (car tracks removed).....	1903	June 26, 1913.
Davis street.....	323	646	1892	Washington street to Harrison avenue.....	1892	
Devonshire street.....	262	786	1899	Milk street to Water street.....	1899	Oct. 1, 1909.
Devonshire street.....	417	1,404	1905	Milk street to Franklin street.....	1905	Oct. 19, 1915.
Dillon street.....	218	315	1902	Lenox street to Sawyer street.....	1902	Nov. 28, 1912.
Doane street.....	312	624	1881	Kilby street to Broad street.....	1881	
Edinboro' street.....	470	924	1895	Essex street to Beach street.....	1895	
Endicott street.....	318	1,078	1899	Cooper street, across Thacher street.....	1899	Oct. 26, 1909.
Exchange place.....	245	708	1903	Congress street to Kilby street.....	1903	Dec. 4, 1913.
Ferdinand street.....	37	107	1899	At Castle square.....	1899	
Greenwich park.....	9	34	1907	At Columbus avenue (crosswalk).....	1907	Jan. 8, 1917.
Groton street.....	335	558	1892	Washington street to Shawmut avenue (block paving).....	1892	
Hanover street.....	315	425	1907	Tileston street, across Charter street.....	1907	July 22, 1917.
Hanover avenue.....	307	266	1892	Hanover street to North street (cobble).....	1892	
Harris street.....	300	373	1904	Hanover street to North street.....	1904	Oct. 22, 1914.
Harrison avenue.....	249	885	1899	22 feet south of Kneeland street to 22 feet north of Harvard street.....	1899	Nov. 16, 1909.
Harrison avenue.....	158	300	1901	Asylum street, across Davis street.....	1901	Aug. 24, 1911.
Harrison avenue.....	143	270	1905	Northerly side of Decatur street, across Gloucester place.....	1905	Sept. 13, 1915.
Harrison avenue.....	248	634	1903	Northerly side Union Park street, across Malden street.....	1903	April 2, 1913.

List of Streets Paved with Trinidad Asphalt.—Continued.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Harrison avenue.....	East Newton street to East Springfield street.....	922	2,664	1888-95	
Harrison avenue.....	East Springfield street to 97 feet southerly.....	.....	140	1888	
Hawes street.....	Congress street to Kilby street.....	258	254	1904	Nov. 6, 1914.
Hayward place.....	9 feet east of Washington street to 85 feet east of Washington street.....	76	172	1906	Sept. 1, 1916.
Hayward place.....	85 feet east of Washington street to Harrison avenue.....	175	395	1905	Aug. 21, 1915.
Hollis street.....	Tremont street toward Washington street (block base).....	261	493	1891	
Holyoke street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Hudson street.....	Beach street to 90 feet north of Curve street, minus Kneeland street and Harvard street intersections.....	1,407	3,938	1891	
Huntington avenue.....	Boylston street, across Dartmouth street.....	624	5,527	1901	Oct. 23, 1911.
Huntington avenue, westerly road-way.....	From 685 feet north of West Newton street to 38 feet north of West Newton street.....	.....	1,831	1907	Oct. 24, 1917.
Kilby street.....	Milk street to Central street.....	400	1,342	1898	
Kilby street.....	Liberty square.....	.....	505	1881	
Kilby street.....	Central street to State street.....	240	672	1904	May 21, 1914.
Laconia street.....	Washington street to Harrison avenue.....	330	727	1896	
La Grange street.....	Tremont street, towards Washington street.....	181	355	1897	
Lincoln place.....	Worcester street to West Springfield street.....	217	313	1897	
Lynn street.....	Cooper street to Thacher street.....	294	457	1906	Aug. 21, 1916.

Malcolm street.....	54 feet south of Mt. Vernon street to Chestnut street (cobble base).....	208	156	1892	
Malden street.....	Washington street to Harrison avenue.....	531	1,534	1902	Dec. 8, 1912.
Mason street.....	Avery street to Tremont street.....	85	206	1900	Nov. 10, 1910.
Massachusetts avenue.....	Columbus avenue to Tremont street, southerly roadway.....	543	1,690	1892	
Massachusetts avenue.....	Tremont street to Shawmut avenue, southerly roadway.....	940	2,934	1892	
Massachusetts avenue.....	Shawmut avenue to Washington street, southerly roadway.....	360	1,040	1892	
Moon street.....	North square to Lewis street (cobble base).....	166	306	1891	
Norman street.....	Green street to South Margin street.....	398	712	1905	Aug. 10, 1915.
North Bennet street.....	Hanover street to Salem street.....	557	928	1904	Oct. 1, 1914.
Northampton street.....	Washington street to Shawmut avenue.....	370	648	1905	Oct. 9, 1915.
Northampton street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
North Margin street.....	Stillman street to Thacher street.....	519	1,178	1895	
Oxford street.....	Beach street to Essex street (macadam).....	430	735	1895	
Parkman street.....	North Anderson street, across Blossom street.....	234	534	1898	
Parmenter street.....	Hanover street to Salem street.....	279	764	1902	Sept. 13, 1912.
Parnell street.....	Lenox street to Sawyer street.....	264	367	1902	Nov. 28, 1912.
Pinckney street.....	Charles street, across Brimmer street.....	271	723	1895	
Pine street.....	Washington street to Harrison avenue.....	419	597	1896	
Pleasant street.....	Bridge over Boston Elevated Railway.....	55	128	1900	
Poplar street.....	Chambers street to Charles street (cobble base).....	1,188	2,442	1887-92	
Porter street.....	At Pleasant street (crossing).....	12	17	1900	
Public Alley No. 301.....	Pinckney street to River street.....	270	400	1897	

List of Streets Paved with Trinidad Asphalt.—Continued.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
† Public Alley No. 401.....	Between Huntington avenue and St. Botolph street, from Irvington street to Garrison street.....	350	362	1899	Oct. 2, 1909.
† Public Alley No. 402.....	Between Huntington avenue and St. Botolph street, from Garrison street to West Newton street.....	358	374	1899	Sept. 30, 1909.
† Public Alley No. 403.....	Between Huntington avenue and St. Botolph street, from West Newton street to Cumberland street.....	355	370	1899	Sept. 29, 1909.
Public Alley No. 414.....	Between Beacon street and Marlborough street, from 53 feet east of Massachusetts avenue to Hereford street.....	614	574	1901	Oct. 24, 1911.
Public Alley No. 415.....	Between Beacon street and Marlborough street, from Hereford street to Gloucester street.....	398	382	1901	Oct. 12, 1911.
Public Alley No. 416.....	Between Beacon street and Marlborough street, from Gloucester street to Fairfield street.....	524	494	1901	Nov. 14, 1911.
Public Alley No. 417.....	Between Beacon street and Marlborough street, from Fairfield street to Exeter street.....	624	583	1901	Nov. 29, 1911.
† Public Alley No. 419.....	Between Beacon street and Marlborough street, from Dartmouth street to Clarendon street.....	575	511	1899	Sept. 28, 1909.
† Public Alley No. 420.....	Between Beacon street and Marlborough street, from Clarendon street to Berkeley street.....	580	515	1897	
Public Alley No. 422.....	Between Commonwealth avenue and Marlborough street, from Arlington street to Berkeley street.....	631	589	1902	Sept. 18, 1912.
Public Alley No. 423.....	Between Commonwealth avenue and Marlborough street, from Berkeley street to Clarendon street.....	580	544	1902	Aug. 26, 1912.
Public Alley No. 424.....	Between Commonwealth avenue and Marlborough street, from Clarendon street to Dartmouth street.....	575	539	1902	April 22, 1912.

Public Alley No. 426	Between Commonwealth avenue and Marlborough street, from Exeter street to Fairfield street.....	624	595	1901	Oct. 16, 1911.
Public Alley No. 428	Between Commonwealth avenue and Marlborough street, from Gloucester street to 205 feet east of Hereford street.....	190	193	1901	Oct. 23, 1911.
† Public Alley No. 431	Between Commonwealth avenue and Newbury street, from 205 feet east of Hereford street to 83 feet west of Gloucester street.....	107	95	1899	Sept. 25, 1909.
Public Alley No. 437	Between Commonwealth avenue and Newbury street, from Berkeley street to Arlington street.....	631	561	1898	
Public Alley No. 701	Between Union Park street and Upton street, from 130 feet east of Tremont street to Shawmut avenue.....	521	611	1899	Nov. 8, 1909.
Rutland square	At Columbus avenue (crosswalk)	9	56	1907	Jan. 8, 1917.
St. James avenue.....	At Huntington avenue.....	123	600	1901	Oct. 23, 1911.
Salutation street.....	Hanover street to Commercial street.....	355	268	1905	Sept. 5, 1915.
South Margin street.....	Staniford street, across Norman street.....	192	390	1905	Aug. 12, 1915.
Spring street.....	Poplar street to Leverett street (cobble base)	447	908	1895	
Stevens street.....	Lincoln place, towards Shawmut avenue.....	16	22	1897	
Stillman street.....	Endicott street, across North Margin street (cobble base).....	170	453	1892	
Stoddard street.....	Howard street to Court street (cobble base).....	135	150	1892	
Sun-court street.....	North street to Moon street (cobble base).....	151	218	1891	
Temple place.....	Washington street to 95 feet westerly.....	95	318	1906	Oct. 1, 1910.
‡ Temple place.....	95 feet west of Washington street to Tremont street.....	408	1,303	1900	Oct. 1, 1910.
Thacher street.....	Washington Street North to Endicott street	203	562	1892	
Tileston street.....	Hanover street, across Unity street.....	412	525	1905	Nov. 23, 1915.
Tileston street.....	Unity street to Salem street.....	163	124	1895	

List of Streets Paved with Trinidad Asphalt.—*Continued.*

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Tremont street.....	Scollay square to 23 feet north of Beacon street.....	460	1,586	1900	Dec. 2, 1910.
Tremont street.....	21 feet south of Beacon street to Boylston street.....	2,317	8,784	1900	Dec. 2, 1910.
Tremont street.....	At Castle square.....	67	774	1899	
Trinity place.....	St. James avenue, across Stuart street.....	391	1,130	1899	Sept. 18, 1909.
Trinity place.....	Stuart street, across Stanhope street.....	262	349	1900	Dec. 1, 1910.
Trinity place.....	Stuart street, across Stanhope street, northerly side.....	.....	408	1907	June 18, 1917.
Union Park street.....	Washington street to Harrison avenue.....	475	1,063	1902	Aug. 2, 1912.
Unity street.....	Charter street to Tileston street.....	330	500	1897	
Warrenton street.....	Eliot street to 380 feet south of Eliot street.....	380	1,055	1891	
Warrenton street.....	380 feet south of Eliot street to Tremont street (cobble base).....	290	730	1884	
Warrenton street.....	Shawmut avenue to Washington street (cobble base).....	468	910	1891	
Water street.....	Congress street to Kilby street.....	256	711	1902	Sept. 16, 1912.
Water street.....	Liberty square to Broad street.....	252	682	1896	
Wellington street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
West street.....	At Tremont street (crosswalk).....	22	64	1900	Dec. 2, 1910.
West Canton street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
West Rutland square.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
West Springfield street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.
Wiget street.....	Salem street to North Margin street.....	259	240	1897	
Wiggin street.....	Tileston street to North Bennet street.....	108	120	1905	Nov. 23, 1915.

Winter street.....	At Tremont street (crosswalk).....	17	38	1900	Dec. 2, 1910.
Worcester street.....	At Columbus avenue (crosswalk)	9	34	1907	Jan. 8, 1917.
Yarmouth street.....	At Columbus avenue (crosswalk).....	9	34	1907	Jan. 8, 1917.

East Boston.

Bennington street.....	Bridge over Boston & Albany Railroad.....	60	507	1906	July 15, 1916.
* Curtis street.....	Bridge over Boston & Albany Railroad.....	41	139	1906	Nov. 21, 1916.
* Maverick street.....	Bridge over Boston & Albany Railroad.....	38	59	1907	Jan. 23, 1917.

Charlestown.

Austin street.....	Seminary place to Lawrence street.....	156	451	1891	Sept. 23, 1916.
Bunker Hill street.....	At Tufts street.....	.....	150	1897	
† Charlestown Bridge.....	Over Fitchburg Railroad.....	61	543	1899	
Corey street.....	124 feet north of Moulton street to Moulton street.....	124	276	1897	
Joiner street.....	Park street to Chelsea street.....	175	447	1906	
Moulton street.....	Easterly side of Corey street to Vine street.....	81	243	1897	
Moulton street.....	Vine street to Bunker Hill street.....	130	390	1897	
Tufts street.....	Bunker Hill street, 141 feet northerly.....	141	415	1897	
Vine street.....	Bunker Hill street, across Moulton street.....	165	670	1897	

List of Streets Paved with Trinidad Asphalt.— *Concluded.*
South Boston.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Bolton street.....	C street to D street.....	517*	747	1905	Oct. 12, 1915.
D street.....	West Fifth street to Gold street.....	140	513	1889	
Dorchester street.....	Easterly side of Vinton street, in front of Methodist Church.....	.....	190	1904	Oct. 18, 1914.
E street.....	West Third street to Bolton street.....	111	410	1892	
E street.....	West Seventh street to West Eighth street.....	325	542	1904	Oct. 24, 1914.
Rogers street.....	Dorchester street to Preble street (cobble base).....	365	496	1891	
West Sixth street.....	C street to D street.....	516	1,490	1905	Oct. 14, 1915.
West Third street.....	150 feet west of E street, across E street.....	185	769	1892	

Roxbury.

Boylston street.....	St. Cecilia street to Massachusetts avenue.....	226	790	1904	Aug. 26, 1914.
Cabot street.....	Tremont street to Ruggles street.....	1,236	3,571	1891	
Cabot street.....	Easterly side of Ruggles street to Vernon street.....	723	2,988	1892	
Cabot street.....	Easterly side of Vernon street to Linden Park street.....	484	1,390	1897	
Eustis street.....	138 feet east of Winslow street to 163 feet west of Albany street.....	130	241	1906	July 31, 1916.
Palmer street.....	121 feet east of Winslow street to 201 feet west of Eustis street.....	134	297	1906	July 11, 1916.
† Public Alley No. 404.....	Between Huntington avenue and St. Botolph street, from 66 feet south of Cumberland street to Public Alley No. 405.....	534	533	1899	Oct. 5, 1909.
† Public Alley No. 405.....	Rear of northeast side of Massachusetts avenue, from 62 feet west of St. Botolph street to 94 feet east of Huntington avenue.....	100	89	1899	Oct. 5, 1909.
Public Alley No. 423.....	Between Commonwealth avenue and Marlborough street, from 205 feet east of Hereford street to Hereford street.....	205	186	1901	Oct. 23, 1911.

Public Alley No. 429	Between Commonwealth avenue and Marlborough street, from 55 feet west of Hereford street to 77 feet east of Massachusetts avenue.....	533	1901	Nov. 13, 1911.
† Public Alley No. 431.....	205 feet east of Hereford street to Hereford street.....	205	1899	Sept. 25, 1909.
Ruggles street.....	Shawmut avenue to Cabot street.....	1,055	1907	Aug. 23, 1917.
Roxbury street.....	Easterly side of Guild row to Washington street.....	170	1904	Aug. 12, 1914.
Vernon street.....	80 feet east of Cabot street, across Auburn street.....	693	1907	Nov. 30, 1917.
Washington street.....	22 feet north of Marvin street, across Zeigler street.....	210	1904	Aug. 12, 1914.

NOTE. — Trinidad asphalt marked thus: * Guaranteed by E. R. Taylor Company; † Simpson Brothers; ‡ United States Paving Company. Other guarantees are by the Barber Asphalt Company. Unless otherwise marked all asphalt is on a cement concrete base.

Trinidad Asphalt.

Summary.

District.	UNDER GUARANTEE.		NOT UNDER GUARANTEE.		DISTRICT TOTALS.	
	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>
City Proper.....	33,143	101,150	25,004	68,651	58,147	169,801
East Boston.....	139	705	.....	.....	139	705
Charlestown.....	175	447	858	3,138	1,033	3,585
South Boston.....	1,358	2,969	801	2,188	2,159	5,157
Roxbury.....	3,985	8,792	2,443	7,949	6,428	16,741
Totals.....	38,800	114,063	29,106	81,926	67,906	195,989

LIST OF STREETS PAVED WITH SICILIAN ROCK ASPHALT, JANUARY 31, 1909.
City Proper.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Acton street.....	Washington street to Bradford street.....	259	352	1896	
Arch street.....	Summer street to Franklin street.....	403	1,522	1901	Oct. 12, 1911.
Ash street.....	Oak street, across Nassau street (cobble base).....	220	391	1895	
Avery street.....	79 feet west of Haymarket place to Mason street.....	68	60	1897	
Barton street.....	Leverett street to Milton street.....	403	683	1895	
Beacon street.....	Arlington street to Dartmouth street.....	1,862	9,965	1901	June 14, 1911.
Boylston street.....	Easterly side of Arlington street to Berkeley street.....	681	2,508	1900	Nov. 28, 1910.
Bradford street.....	Waltham street to Shawmut avenue.....	600	1,270	1897	
Charter street.....	Hanover street, across Unity street.....	14	50	1896	
Clark street.....	Hanover street to North street.....	18	35	1896	
Cobb street.....	Washington street to Shawmut avenue.....	347	1,041	1897	
Decatur street.....	Washington street to Harrison avenue.....	370	781	1892	
Dwight street.....	Shawmut avenue to Tremont street.....	716	2,075	1893	
East Concord street.....	From Albany street 12 feet westerly.....	12	45	1897	
Essex place.....	Tufts street to Essex street.....	202	348	1901	Oct. 3, 1911.
Exeter place.....	Chauncy street to Harrison avenue.....	170	387	1897	
Fabin street.....	Newland street to Ivanhoe street.....	421	615.	1895	
Fay street.....	Dover street to Harrison avenue (cobble base).....	318	560	1894	

Hamburg street.....	Mystic street to Harrison avenue.....	383	597	1896	
Hanover street.....	Tileston street, across Charter street.....	.....	323	1896	
Harrison avenue.....	Northampton street to Lenox street.....	427	1,090	1903	May 29, 1913.
Huntington avenue.....	Boston & Albany Railroad to Cumberland street.....	1,591	7,009	1896	
India street.....	Milk street to India street (formerly India square).....	565	2,135	1901	Nov. 9, 1911.
Kingston street.....	Beach street to Essex street.....	492	1,859	1899	Aug. 9, 1909.
Marlborough street.....	Arlington street to Clarendon street.....	1,251	5,004	1901	Aug. 8, 1911.
Mason street.....	West street to 213 feet south of West street.....	209	459	1901	Aug. 15, 1911.
Massachusetts avenue.....	Washington street to Harrison avenue, southerly roadway.....	688	2,030	1894	
Massachusetts avenue.....	Harrison avenue to Albany street, southerly roadway.....	636	1,908	1894	
Massachusetts avenue.....	27 feet south of Marlborough street to Beacon street.....	326	1,557	1901	Nov. 20, 1911.
Mayo street.....	Castle street to Cobb street.....	251	418	1897	
Meander street.....	East Dedham street to Malden street.....	307	437	1896	
Morton street.....	Salem street to Endicott street.....	325	253	1901	Dec. 16, 1911.
Motte street.....	Washington street to Harrison avenue.....	332	516	1899	
Mystic street.....	Malden street to East Dedham street.....	204	226	1896	
Mystic street.....	East Dedham street to East Canton street.....	215	335	1896	
Mystic street.....	East Canton street to East Brookline street.....	216	337	1896	
Newland street.....	West Brookline street to West Newton street.....	336	486	1902	Oct. 15, 1912.
North Margin street.....	Thacher street, toward Endicott street.....	205	518	1897	
Norwich street.....	Mystic street to Meander street.....	221	339	1896	
Ohio street.....	Washington street to Shawmut avenue.....	343	277	1896	

List of Streets Paved with Sicilian Rock Asphalt.—Continued.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Otter street.....	Beacon street to 168 feet north of Beacon street.....	168	523	1901	Sept. 19, 1911.
Pemberton square.....	Front of Suffolk County Courthouse.....	323	1,365	1894	
Princee street.....	Hanover street to 293 feet west of Hanover street.....	293	654	1895	
* Princee street.....	293 feet west of Hanover street to Salem street.....	213	497	1900	Dec. 7, 1910.
Public Alley No. 12.....	Poplar street to Public Alley No. 14.....	77	68	1903	Sept. 22, 1913.
Public Alley No. 434.....	Between Commonwealth avenue and Newbury street, from Exeter street to Dartmouth street.....	555	483	1901	Oct. 29, 1911.
Public Alley No. 436.....	Between Commonwealth avenue and Newbury street, from Clarendon street to Berkeley street.....	580	544	1901	Oct. 19, 1911.
Public Alley No. 438.....	Between Newbury and Boylston streets, from Arlington street to Berkeley street.....	631	589	1901	Oct. 22, 1911.
Public Alley No. 440.....	Between Newbury and Boylston streets, from Dartmouth street to Exeter street.....	555	529	1901	Nov. 5, 1911.
Public Alley No. 441.....	Between Newbury and Boylston streets, from Exeter street to Fairfield street.....	622	553	1903	May 25, 1913.
Public Alley No. 442.....	Between Newbury and Boylston streets, from 59 feet west of Fairfield street to 110 feet east of Gloucester street.....	351	312	1901	Nov. 29, 1911.
Salem street.....	Endicott street, across Princee street.....	1,142	2,235	1901	Nov. 22, 1911.
Shawmut avenue.....	132 feet south of Castle street, across Cherry street.....	327	945	1898	
Stoughton street.....	At Albany street.....	12	45	1897	
Taylor street.....	Dwight street to Milford street.....	196	274	1896	
Tufts street.....	Kingston street to South street.....	485	985	1901	Sept. 13, 1911.
Tyler street.....	Oak street to Harvard street.....	530	1,413	1901	Nov. 1, 1911.
Whitmore street.....	Kneeland street to Harvard street.....	249	445	1895	

East Boston.

* Meridian street.....	Trenton street to Eutaw street.....	235	600	1900	Dec. 3, 1910.
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Charlestown.

* Lawrence street.....	East side of Lawrence avenue, across Miller street	385	1,014	1901	Nov. 18, 1911.
* Miller street.....	Main street to Lawrence street	203	383	1901	Nov. 18, 1911.
Warren street.....	Winthrop street, across Soley street	128	302	1901	Aug. 22, 1911.

South Boston.

Athens street.....	West Second street to A street (bituminous concrete)	636	954	1895	
Athens street.....	B street to C street.....	520	751	1892	
* Athens street.....	C street to D street.....	519	750	1901	Aug. 16, 1911.
B street.....	At West Broadway (northerly side).....	11	39	1897	
B street.....	At West Broadway (southerly side).....	10	36	1897	
* Bowen street.....	C street to D street.....	519	750	1901	Oct. 30, 1911.
* Bowen street.....	D street to E street.....	523	755	1901	Oct. 30, 1911.
C street.....	At West Broadway (northerly side).....	11	40	1897	
D street.....	At West Broadway (southerly side).....	10	38	1897	
D street.....	At West Broadway (northerly side).....	11	41	1897	
East Broadway.....	Front of Lincoln School.....	180	1,000	1897	
* Gold street.....	B street to C street.....	524	747	1901	Oct. 10, 1911.
* Gold street.....	C street to D street.....	521	753	1901	Oct. 10, 1911.
K street.....	East Sixth street to East Eighth street.....	566	1,083	1896	

List of Streets Paved with Sicilian Rock Asphalt.— Concluded.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
* Silver street.....	B street to C street.....	522	754	1901	Aug. 7, 1911.
* Silver street.....	C street to D street.....	520	751	1901	Aug. 7, 1911.
* Tudor street.....	C street to D street.....	515	744	1901	Oct. 12, 1911.
West Broadway.....	From 196 feet east of easterly line of Dorchester avenue to A street.....	352	1,278	1892	
West Broadway.....	New England Railroad Bridge, across Gardner place (4-foot gutter).....	.....	341	1897	
West Broadway.....	Gardner place to 150 feet easterly.....	150	648	1893	
West Broadway.....	150 feet east of Gardner place to E street (4-foot gutter).....	.....	1,109	1897	
West Broadway.....	150 feet west of F street to 267 feet east of F street.....	448	1,544	1897	
West Broadway.....	267 feet east of F street to 28 feet west of Dorchester street.....	410	1,818	1898	
Roxbury.					
Commonwealth avenue.....	Easterly side of Massachusetts avenue to westerly side of Massachusetts avenue.....	43	936	1901	Nov. 20, 1911.
Dudley street.....	Easterly side, between Dunmore street and Magazine street.....	.....	350	1902	Nov. 1, 1912.
Huntington avenue.....	Northerly side of Cumberland street to Massachusetts avenue.....	747	4,150	1896	
Huntington avenue.....	Massachusetts avenue to Gainsborough street.....	587	3,372	1896	
Ipswich street.....	Bridge over waterway.....	61	267	1898	
Massachusetts avenue.....	Huntington avenue to south side of Commonwealth avenue.....	2,336	10,869	1901	Nov. 20, 1911.
Massachusetts avenue.....	North side of Commonwealth avenue to 27 feet south of Marlborough street.....	253	1,195	1901	Nov. 20, 1911.
Public Alley No. 901.....	Hemenway to Hemenway street, between Hemenway street and the Fenway.....	573	550	1902	Nov. 6, 1912.

Brighton.

Brooks street.....	Bridge (over center roadway).....	.....	130	1902	May 17, 1912.
Commonwealth avenue.....	Cottage Farm Bridge (over Boston & Albany Railroad)	140	1,556	1896	

NOTE.— Sicilian rock asphalt marked thus * guaranteed by Jones & Meehan. Sicilian rock asphalt having guarantee and not otherwise designated is guaranteed by the Boston Asphalt Company. All Sicilian rock asphalt not otherwise marked is laid on a cement concrete base.

Sicilian Rock Asphalt.

Summary.

District.	UNDER GUARANTEE.		NOT UNDER GUARANTEE.		DISTRICT TOTALS.	
	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>
City Proper.....	12,988	35,917	10,928	27,343	23,916	63,260
East Boston.....	235	600	.....	.....	235	600
Charlestown.....	716	1,699	.....	.....	716	1,699
South Boston.....	4,163	6,004	3,315	10,720	7,478	16,724
Roxbury.....	3,205	13,900	1,395	7,789	4,600	21,689
Brighton.....	.....	130	140	1,556	140	1,686
Totals.....	21,307	58,250	15,778	47,408	37,085	105,658

LIST OF STREETS PAVED WITH SEYSSSEL ROCK ASPHALT, JANUARY 31, 1909.

NAME.	Location.	Length. in Feet.	Area.	Year Laid.	Guarantee Expires.
Genesee street.....	Harrison avenue to Albany street.....	505	1,122	1899	
Mason street.....	449 feet south of West street to Avery street.....	118	255	1899	
Milton street.....	Brighton street to Spring street.....	308	274	1899	Sept. 8, 1909.
Oswego street.....	Harrison avenue to Albany street.....	506	1,068	1899	
Paul street.....	Emerald street to Village street.....	133	236	1897	
Paul street.....	Village street to Tremont street.....	276	456	1897-99	
Pelham street.....	Washington street to Shawmut avenue.....	320	693	1897	
Public Alley No. 102.....	23 feet south of Marshall street to Creek square.....	182	184	1899	Nov. 11, 1909.
Public Alley No. 702.....	Worcester street to West Springfield street.....	222	222	1899	Nov. 9, 1909.
Public Alley No. 703.....	Newland street and Public Alley No. 702.....	116	103	1899	Nov. 9, 1909.
Waterford street.....	Washington street to Shawmut avenue.....	316	544	1897	

NOTE. — Seyssel rock asphalt guaranteed by Jones & Meehan. All Seyssel rock asphalt is laid on a cement concrete base.

LIST OF STREETS PAVED WITH BERMUDEZ ASPHALT, JANUARY 31, 1909.

City Proper.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Camden street.....	At Columbus avenue (crosswalk) east and west.....	18	68	1907	Jan. 4, 1917.
Columbus avenue.....	Northerly side of Camden street to 301 feet south of Camden street.....	335	1,340	1907	Jan. 4, 1917.

Roxbury.

Burke street.....	At Columbus avenue (crosswalk).....	26	66	1907	Jan. 4, 1917.
Columbus avenue.....	301 feet south of Camden street to 67 feet north of Station street.....	3,511	14,239	1907	Jan. 4, 1917.
Cunard street.....	At Columbus avenue (crosswalk).....	16	60	1907	Jan. 4, 1917.
Davenport street.....	At Columbus avenue (crosswalk).....	26	66	1907	Jan. 4, 1917.
Riverside street.....	At Columbus avenue (crosswalk).....	9	21	1907	Jan. 4, 1917.
Sarsfield street.....	At Columbus avenue (crosswalk).....	18	40	1907	Jan. 4, 1917.
Walpole street.....	At Columbus avenue (crosswalk) east and west.....	18	46	1907	Jan. 4, 1917.
Weston street.....	At Columbus avenue (crosswalk).....	9	20	1907	Jan. 4, 1917.

NOTE. — Bermudez asphalt guaranteed by the Boston Asphalt Company.

LIST OF STREETS PAVED WITH ACME ASPHALT, JANUARY 31, 1909.

City Proper.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Corning street.....	Shawmut avenue to Washington street.....	338	734	1908	Nov. 25, 1918.

East Boston.

* Porter street.....	Bridge over Boston & Albany Railroad.....	37	128	1907	Oct. 19, 1917.
* Prescott street.....	Bridge over Boston & Albany Railroad.....	36	125	1907	Oct. 19, 1917.
* Saratoga street.....	Bridge over Boston & Albany Railroad.....	95	180	1907	Sept. 16, 1917.

NOTE. — Acme asphalt marked thus * guaranteed by W. A. Murtfeldt Company, otherwise by the Warren Brothers Company.

LIST OF STREETS PAVED WITH AMERICAN ROCK ASPHALT, JANUARY 31, 1909.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Beacon street (City Proper).....	Northerly side of Brimmer street, across Arlington street.....	358	1,486	1908	July 3, 1918.
K street (South Boston).....	East Fourth street, across East Sixth street.....	600	2,113	1906	Sept. 14, 1916.
Kilby street (City Proper).....	East side from Milk street, across Central street.....	.....	1,540	1908	Aug. 31, 1918.

NOTE.—American rock asphalt guaranteed by Jones & Meehan.

LIST OF STREETS PAVED WITH LIMMER ROCK ASPHALT.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Mt. Vernon street (City Proper).....	Archway under State House.....	164	455	1897	
Sumner street (East Boston).....	Bridge over Boston & Albany Railroad.....	38	187	1908	

NOTE.—Limmer rock asphalt guaranteed by W. A. Murtfeldt Company.

LIST OF STREETS PAVED WITH COAL TAR COMPOSITION.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Ashburton place (City Proper).....	55 feet east of Bowdoin street.....	55	128	1908	
I street (South Boston).....	East Broadway to East Fourth street.....	272	1,027	1889	
Ivanhoe street (City Proper).....	West Dedham street to West Canton street.....	216	312	1906	
Malcolm street (City Proper).....	Mt. Vernon street to 54 feet south of Mt. Vernon street.....	54	46	1908	

Summary of all Asphalts.

KIND.	UNDER GUARANTEE.		NOT UNDER GUARANTEE.		TOTALS.		
	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Feet.</i>	Area. <i>Sq. Yds.</i>	Length. <i>Miles.</i>
Trinidad.....	38,800	114,063	29,106	81,926	67,906	195,989	12.86
Sicilian rock.....	21,307	58,250	15,778	47,408	37,085	105,658	7.02
Seyssel rock.....	828	783	2,174	4,374	3,002	5,157	0.57
Bermudez.....	3,986	15,966	.....	.....	3,986	15,966	0.76
Acme.....	506	1,167	.....	.....	506	1,167	0.10
American rock....	958	5,139	.....	.....	958	5,139	0.18
Limmer rock.....	38	187	164	455	202	642	0.04
Coal tar.....	.....	.....	597	1,513	597	1,513	0.11
Totals.....	66,423	195,555	47,819	135,676	114,242	331,231	21.64

LIST OF STREETS PAVED WITH BITULITHIC, JANUARY 31, 1909.

City Proper.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Albany street.....	Northerly side of Stoughton street, across East Concord street (laid on existing concrete base).....	309	1,854	1905.	Dec. 2, 1915.
Albany street.....	225 feet north of Massachusetts avenue to Massachusetts avenue.....	225	1,350	1905	Nov. 3, 1915.
Allen street.....	Charles street to Chambers street.....	1,297	3,556	1905	Sept. 9, 1915.
Ashburton place.....	Somerset street to 55 feet east of Bowdoin street.....	285	682	1904	Aug. 17, 1914.
Belvidere street.....	West Newton street to 195 feet west of Falmouth street.....	317	1,116	1903	April 25, 1913.
Berkeley street.....	Boylston street to Commonwealth avenue.....	582	2,587	1903	May 22, 1913.
Berkeley street.....	Commonwealth avenue to Marlborough street.....	280	1,245	1903	May 22, 1913.
Berkeley street.....	Marlborough street to Beacon street.....	264	1,173	1903	May 22, 1913.
Berkeley street.....	Tremont street to Columbus avenue.....	1,195	4,663	1906	Dec. 14, 1916.
Bowdoin street.....	Ashburton place to Cambridge street.....	854	2,259	1902	Oct. 23, 1912.
Boylston street.....	Dartmouth street to 205 feet east of Hereford street.....	1,999	7,152	1904	Nov. 18, 1914.
Clarendon street.....	Boylston street to Commonwealth avenue.....	582	2,336	1905	Aug. 21, 1915.
Clarendon street.....	Commonwealth avenue to Beacon street.....	580	2,320	1905	Aug. 21, 1915.
Dartmouth street.....	Southerly side of Newbury street to Commonwealth avenue.....	326	2,536	1903	July 13, 1913.
Dartmouth street.....	Commonwealth avenue to Beacon street.....	579	4,503	1903	July 13, 1913.
Emerald street.....	Castle street to Dover street.....	912	2,639	1904	July 27, 1914.
Florence street.....	Washington street to Harrison avenue.....	352	704	1906	Sept. 8, 1916.
Garden Court street.....	North square to Fleet street.....	233	377	1906	Oct. 23, 1916.

Hancock street.....	Mt. Vernon street to Myrtle street.....	317	816	1902	July 17, 1912.
Hancock street.....	Myrtle street to Cambridge street.....	646	1,702	1902	Nov. 15, 1912.
Harrison avenue.....	North side of East Springfield street to Northampton street.....	508	1,174	1905	Nov. 24, 1915.
Huntington avenue.....	9 feet south of Dartmouth street to bridge over B. & A. R. R.....	697	3,947	1906	Sept. 15, 1916.
Mason street.....	213 feet south of West street to 449 feet south of West street.....	236	480	1907	June 1, 1917.
Massachusetts avenue.....	Southerly side of Beacon street to Harvard bridge.....	237	1,080	1902	Nov. 22, 1912.
Massachusetts avenue.....	Columbus avenue to Providence Division, N. Y., N. H. & H. R. R.....	469	2,248	1903	Aug. 11, 1913.
Massachusetts avenue.....	Columbus avenue to Tremont street (northerly roadway), laid on existing concrete base.....	.....	1,689	1907	June 13, 1917.
McLean street.....	Chambers street to Blossom street.....	518	1,345	1905	July 20, 1915.
Moon street.....	Lewis street to Fleet street.....	107.	203	1906	Oct. 13, 1916.
North square.....	North street to Moon street.....	239	1,250	1906	Dec. 24, 1916.
Oneida street.....	Harrison avenue to Albany street.....	508	1,072	1903	Aug. 22, 1913.
Prince street.....	Garden Court street to Hanover street.....	134	223	1906	Oct. 23, 1916.
Tyler street.....	Beach street to Kneeland street.....	320	853	1905	Oct. 23, 1915.
Tyler street.....	Kneeland street to Harvard street.....	332	885	1905	Oct. 23, 1915.
Tyler street.....	Oak street to Curve street.....	441	1,187	1905	Oct. 23, 1915.
West Newton street.....	Columbus avenue to Huntington avenue.....	1,044	3,944	1903	July 3, 1913.
West Newton street.....	Huntington avenue across Belvidere street.....	262	990	1903	April 25, 1913.
West Newton street.....	Tremont street to Columbus avenue.....	790	3,196	1904	Aug. 13, 1914.

East Boston.

Maverick street.....	London street to Havre street.....	180	620	1903	June 2, 1913.
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List of Streets Paved with Bitulithic.— Concluded.
South Boston.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Bowen street.....	E street to F street.....	515	744	1903	May 22, 1913.
Dorchester street.....	Broadway to Eighth street (minus intersection at Fourth street, Fifth street and Eighth street).....	1,324	5,865	1905	Sept. 20, 1915.
E street.....	South side of West Fourth to West Broadway.....	333	1,221	1903	June 2, 1913.
G street.....	110 feet north of East Sixth street to 178 feet north of East Seventh street.	230	828	1905	July 3, 1915.
Silver street.....	A street to B street.....	500	750	1903	June 4, 1913.
Silver street.....	225 feet west of E street to E street.....	225	325	1903	June 2, 1913.
Thomas park.....	Around Telegraph hill.....	2,056	7,042	1905	July 3, 1915.
West Broadway.....	Intersection at Dorchester street.....	87	250	1905	Sept. 20, 1915.
West Fourth street.....	E street to 207 feet west of E street.....	207	759	1903	June 2, 1913.

Roxbury.

Albany street.....	Hampden street to Eustis street.....	1,613	4,900	1907	Aug. 3, 1917.
Belvidere street.....	Massachusetts avenue to 195 feet west of Falmouth street.....	1,021	2,949	1903	April 25, 1913.
Blue Hill avenue.....	Dewey street to north side of Savin street.....	598	1,528	1906	Nov. 16, 1916.
Blue Hill avenue.....	Brunswick street to northerly side of Devon street.....	199	509	1906	Dec. 7, 1916.
Boylston street.....	205 feet east of Hereford street to 8 feet east of Hereford street.....	197	677	1904	Nov. 18, 1914.
Boylston street.....	Massachusetts avenue to westerly line of Hemenway street.....	390	1,414	1905	Sept. 2, 1915.

Dacia street.....	Northerly side of Woodcliff street, across Dove street.....	290	838	1906	Oct. 2, 1916.
Dearborn street.....	At Albany street.....	56	220	1907	Aug. 3, 1917.
Gainsborough street.....	Huntington avenue to Providence Division, N. Y., N. H. & H. R. R.....	550	2,078	1903	July 17, 1913.
Massachusetts avenue.....	Providence Division, N. Y., N. H. & H. R. R., to Huntington avenue.....	561	2,150	1903	Aug. 11, 1913.
Roxbury street.....	Shawmut avenue to Kent street.....	557	2,160	1904	Sept. 21, 1914.
St. Alphonsus street.....	Tremont street to northerly side of Smith street.....	524	1,514	1905	Sept. 9, 1915.
Smith street.....	St. Alphonsus street to Phillips street.....	585	1,690	1904	July 9, 1914.
Tremont street.....	St. Alphonsus street to Phillips street.....	587	1,854	1902	Dec. 11, 1912.
Woodcliff street.....	Dacia street to Blue Hill avenue.....	309	893	1906	Oct. 2, 1916.

NOTE. — Bitulithic is guaranteed by Warren Brothers Company.

Summary of Bitulithic.

DISTRICT.	Length. <i>Feet.</i>	Area. <i>Square Yards.</i>
City Proper.....	18,976	71,336
East Boston.....	180	620
South Boston.....	5,477	17,784
Roxbury.....	8,037	25,374
Totals.....	32,670	115,114

LIST OF STREETS PAVED WITH WOOD BLOCKS, JANUARY 31, 1909.

City Proper.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
Atlantic avenue.....	811 feet south of Kneeland street to 1,263 feet south of Kneeland street (bridge).....	452	1,996	1906	
Avery street.....	At Washington street (crossing).....	12	8	1906	Nov. 23, 1916.
Avon street.....	At Washington street (crossing).....	9	20	1906	Nov. 23, 1916.
Beacon street.....	Massachusetts avenue to Raleigh street.....	1,527	8,145	1901	Oct. 7, 1911.
Boylston street.....	Boylston place across Charles street.....	433	1,690	1901	
Charles street.....	At Boylston street.....	30	243	1901	
Church street.....	Boylston street to Providence street.....	153	542	1908	Nov. 9, 1918.
† Court street.....	At Washington street (crossing).....	9	27	1908	Nov. 21, 1918.
† Court avenue.....	At Washington street (crossing).....	7	8	1908	Nov. 21, 1918.
† Cornhill court.....	At Washington street (crossing).....	9	8	1908	Nov. 21, 1918.
Eliot street.....	East side Pleasant street to Columbus avenue.....	163	800	1907	Nov. 30, 1917.
Harvard Bridge.....	Southerly abutment to center of draw (plank base).....	978	5,542	1901	Dec. 1, 1911.
Hayward place.....	Washington street to 9 feet easterly (crossing).....	9	20	1906	Nov. 23, 1916.
Mason street.....	At West street (crossing).....	6	14	1908	Sept. 19, 1918.
Newbury street	Fairfield street to 205 feet east of Hereford street	750	3,000	1901	Nov. 2, 1911.

Park square.....	Boylston street to south side of Eliot street	482	4,100	1907	Nov. 30, 1917.
Pleasant street.....	Eliot street to Park square.....	93	425	1907	Nov. 30, 1917.
Providence street.....	134 feet east of Church street to Park square.....	141	725	1907	Nov. 30, 1917.
Providence street.....	134 feet east of Church street, across Church street	165	512	1908	Nov. 10, 1918.
* Public Alley No. 442.....	Between Newbury street and Boylston street, from Gloucester street to 110 feet east of Gloucester street.....	110	98	1901	Nov. 29, 1911.
† State street.....	Washington street to Devonshire street.....	115	530	1908	Dec. 4, 1918.
Summer street.....	Washington street to Hawley street.....	234	990	1908	Oct. 17, 1918.
Tremont street.....	23 feet north of Beacon street to 21 feet south of Beacon street.....	65	231	1900	Dec. 2, 1910.
Tremont street.....	18 feet north of Park street to southerly street line of Temple place (on the westerly side).....	.....	1,064	1900	Dec. 2, 1910.
Washington street.....	Milk street to Beach street.....	2,279	8,660	1906	Nov. 23, 1916.
† Washington street.....	Cornhill to 78 feet south of Court avenue.....	509	1,475	1908	Nov. 21, 1918.
Washington street.....	South side Milk street to 78 feet south of Court avenue.....	538	1,860	1907	June 26, 1917.
Water street.....	Devonshire street to Congress street.....	213	956	1907	July 12, 1917.
West street.....	Washington street to Tremont.....	463	1,126	1908	Sept. 19, 1918.

Dorchester.

Washington street.....	Moultrie street to Centre street.....	182	850	1907	Aug. 15, 1917.
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List of Streets Paved with Wood Blocks.—Concluded.
Roxbury.

NAME.	Location.	Length in feet.	Area.	Year Laid.	Guarantee Expires.
Massachusetts avenue.....	Bridge over Boston & Albany Railroad.....	75	500	1908	
Newbury street.....	205 feet east of Hereford street.....	205	820	1901	Nov. 12, 1911.
‡ Newbury street	Easterly side of Hereford street to Massachusetts avenue.....	705	2,820	1903	Oct. 7, 1913.

NOTE. — Wooden block pavement not otherwise marked is guaranteed by the United States Wood Preserving Company. Marked thus * is guaranteed by Boston Asphalt Company; thus † is guaranteed by James Doherty; thus ‡ is guaranteed by Patrick McGovern. All wooden block pavements are on cement concrete base unless otherwise marked.

Summary of Wood Block.

DISTRICT.	Length. Feet.	Area. Square Yards.
City Proper.....	9,954	44,815
Roxbury.....	985	4,140
Dorchester.....	182	850
Totals.....	11,121	49,805

LIST OF STREETS WITH CEMENT PAVEMENT, JANUARY 31, 1909.

NAME.	Location.	Length in Feet.	Area.	Year Laid.	Guarantee Expires.
* Main street (Charlestown).....	Bridge over Boston & Maine Railroad to Somerville line.....	139	672	1906	Dec. 8, 1911.
* Rochester street (City Proper)....	Harrison avenue to Albany street.	508	1,129	1907	Nov. 23, 1912.
† Zeigler street (Roxbury).....	Washington street to Warren street.....	315	946	1908	Nov. 18, 1913.

Cement pavement marked thus * guaranteed by Simpson Brothers Corporation; thus † guaranteed by R. S. Blome Company.

Summary of all Smooth Pavements.

KIND.	Length.		Area.	
	Feet.	Miles.	Square Yards.	
Asphalt.....	114,242	21.64	331,231	
Bitulithic.....	32,670	6.19	115,114	
Wood block.....	11,121	2.10	49,805	
Cement.....	962	0.18	2,747	
Totals.....	158,995	30.11	498,897	

PROPERTY IN CHARGE OF THE PAVING DIVISION.

South Boston.

Columbia road, corner H street, stable, carriage house, shed, tool house and office, built by the city on land containing 12,017 square feet, rented from William H. Hart.

Columbia road, corner of Hamlin street, lot of land used for storage purposes, containing 6,710 square feet, rented from Charles P. Mooney, agent.

East Boston.

Chelsea street, Nos. 492 and 494, wharf property, containing 118,584 square feet (L 3,117), purchased in 1897 from Francis S. Lally. This property is at present not in use.

East Eagle street, corner Glendon street, sheds, stable and office building, erected by the city on wharf property containing 326,700 square feet, leased in 1900 from Blodgett & Whidden for a term of ten years. This property is used jointly with the Sewer, Sanitary and Street Cleaning and Watering Divisions.

Charlestown.

Medford street, foot of Elm street, wharf property, containing 44,194 square feet (Sur. Prog. 968), owned by the city. Upon this lot are a shed, stable and office building.

Brighton.

Union street, opposite Shepard street, lot of land containing 37,000 square feet, owned by the city. This lot is at present not in use.

Chestnut Hill avenue, ledge lot containing 569,776 square feet (L 1,630), purchased in 1882 by the city. Upon this lot are stone crusher, stable, shed and office building.

West Roxbury.

Child street, lot of land containing 43,024 square feet, owned by the city. Upon this lot are sheds, stable and office building.

Mt. Vernon street, near Pleasant street, lot of land containing 16,275 square feet, belonging to the Schoolhouse Commission. Upon this lot is a stable and office building.

Morton street, near Canterbury street, lot of land containing 14,484 square feet, owned by the city and used for storage purposes.

Rosemary street, lot of land used for storage purposes, containing 3,780 square feet, rented from Edward Cook.

Dorchester.

Hancock street, opposite Bowdoin street, lot of land known as the almshouse lot, containing 104,132 square feet, which belonged to the town of Dorchester at the time of annexation. Upon this land are two stables, office, shed and tool house.

Downer avenue, lot of land containing 35,300 square feet, was purchased in 1871 to protect the almshouse lot.

Codman street, ledge lot containing 299,000 square feet, was purchased in 1870. Upon this lot is a shed containing steam engine and stone crusher, also a stable and tool house — 111,423 square feet additional bought in 1907 by the city.

Brush Hill road, Milton, lot of land containing 64,523 square feet, leased May 13, 1843, by the town of Dorchester for a term of 999 years.

Lot of land adjoining above, containing 30,000 square feet, owned by the City of Boston. These lots are not now in use.

Magnolia street, near Bird street, lot of land containing 81,068 square feet, was purchased by the town of Dorchester in 1867. This lot is not now in use.

Roxbury.

Highland street, lot of land containing about 72,000 square feet, owned by the city. Upon this lot is a large brick stable erected in 1873-74 and used by the Sanitary and Paving Divisions; also a brick building used as a blacksmith shop and a shed for storage purposes.

Washington street, corner Dimock street, lot containing 134,671 square feet, owned by the city. Upon this lot are buildings containing steam engine, stone crusher and scales.

South End.

Albany street, opposite Sharon street, wharf lot, containing 89,224 square feet. Upon this lot are stables, office, blacksmith and carpenter shops. Wharf lot adjoining above, containing 39,511 square feet, used for storage purposes. Both these wharves are owned by the city.

Massachusetts avenue, near Magazine street, lot of land containing 317,322 square feet, rented from the New York, New Haven & Hartford Railroad Company and used for storage purposes.

Back Bay.

Hereford street, near Boylston street, lot of land containing 28,020 square feet, owned by the city. Upon this lot are a stable, shed and office building.

North End.

Commercial street, No. 521, wharf lot, containing 22,555 square feet, owned by the city. Upon this lot are a stable, shed and office building.

Atlantic avenue, opposite Oliver street, wharf lot, containing 21,054 square feet, placed in charge of the Paving Division May 18, 1874. This property is now used by the Sanitary Division.

Atlantic avenue, opposite Oliver street, wharf property, containing 36,460 square feet, leased from J. H. Hecht on February 19, 1898, for ten years. This lease is held by the Sanitary Division, to which the Paving Division pays for storage purposes the sum of \$5,200 per year.

Revere street, wharf lot, containing 20,013 square feet, leased from J. J. Costello on July 20, 1899, for a term of ten years, for storage purposes. Portion of this lot is used by the Sewer Division.

LIST OF CONTRACTS FROM FEBRUARY 1, 1908, TO JANUARY 1, 1909, MADE BY THE STREET DEPARTMENT.

Paving with Wood Blocks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
Congress street, between State and Water streets.....	James Doherty.....	Sept. 15, 1908	Not started.	(A) 1,435 square yards @ \$2 70..	\$3,861 00
				(B) 240 cubic yards @ 4 50..	1,080 00
				(C) 10 square yards @ 0 85..	8 50
				(D) 1,460 square yards @ 0 29..	423 40
				(E) 140 linear feet @ 0 11..	15 40
				(F) 130 square yards @ 0 30..	39 00
				(G) 5 square yards @ 0 25..	1 25
				(H) 24 square yards @ 0 80..	19 20
Washington street, from Cornhill to about 78 feet south of Court avenue.....	James Doherty.....	Sept. 15, 1908	Completed [Dec. 9, 1908.]		Nothing.
					\$5,447 75
				(A) 1,280 square yards @ \$2 66..	\$3,404 80
				(B) 1,280 square yards @ 0 75..	960 00
				(D) 1,280 square yards @ 0 29..	371 20
					² \$6,823 15

¹ Advertised and awarded to lowest bidder.

² Contract extended to include State street, north and south of Old State House.

- EXPLANATION OF LETTERS.
- (A) Furnishing and laying wood block paving and guaranteeing the same for a period of ten (10) years after completion.
- (B) Concrete base for wood block paving and crosswalks and brows.
- (C) Granite block paving with pitch joints.
- (D) Preparing site.
- (E) Excavating and setting edgestones.
- (F) Excavating and laying brick sidewalks.
- (G) Granite block paving with gravel joints.
- (H) Flagging crosswalks with pitch joints.

Paving with Asphalt.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
* ¹ Beacon street, between Brimmer and Arlington streets...	Jones & Meehan.....	May 22, 1908	Completed July 3, 1908.	(A) 1,470 square yards @ \$1 90.. \$2,793 00 (C) 5 cubic yards @ 6 00.. 30 00 (D) 20 cubic yards @ 8 00.. 160 00 (E) 89 linear feet @ 0 25.. 22 25 (F) 30 square yards @ 1 00.. 30 00 (G) 15 square yards @ 0 65.. 9 75 \$3,045 00	\$3,075 87
* ¹ Kilby street, between Central and Milk streets.....	Jones & Meehan.....	May 22, 1908	Completed Aug. 31, 1908.	(A) 1,490 square yards @ \$1 90.. \$2,831 00 (B) 28 square yards @ 1 00.. 28 00 (C) 5 cubic yards @ 6 00.. 30 00 (D) 52 cubic yards @ 8 00.. 416 00 \$3,305 00	\$3,423 90
* ¹ Batterymarch street, from Milk street, 215 feet south and east.....	Jones & Meehan.....	Nov. 4, 1908	Not started.	(AA) 680 square yards @ \$2 00.. \$1,360 00 (B) 52 square yards @ 1 00.. 52 00 (E) 50 linear feet @ 0 25.. 12 50 (F) 25 square yards @ 0 30.. 7 50 (G) 720 square yards @ 0 50.. 360 00 (H) 38 square yards @ 0 60.. 22 80 \$1,814 80	Nothing.

† 1 Corning street, between Wash- ington street and Shawmut avenue.....	Warren Brothers Company.	Oct. 14, 1908	Completed Nov. 26, 1908.	(B) 40 square yards @ \$0 75.. (C) 10 cubic yards @ 6 00.. (D) 2 cubic yards @ 7 50.. (E) 675 linear feet @ 0 20.. (F) 380 square yards @ 0 25.. (G) 30 square yards @ 0 50.. (H) 5 square yards @ 0 50.. (I) 870 square yards @ 1 84.. \$1,953 30	\$1,875 43
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1 Advertised and awarded to lowest bidder.

* American rock asphalt.

† Acme asphalt.

EXPLANATION OF LETTERS.

(AA) Furnishing and laying a 2-inch wearing surface on existing granite blocks and guaranteeing same for a period of five (5) years after completion.

(A) Furnishing and laying a 2-inch wearing surface and 1-inch binder on existing concrete base and guaranteeing same for a period of ten (10) years after completion.

(B) Laying granite block paving and crosswalk flagging with pitch joints, including paving blocks barred up.

(C) Furnishing and laying extra cement concrete base.

(D) Furnishing and laying extra bituminous binder.

(E) Excavating and setting edgestones.

(F) Excavating and laying brick sidewalks.

(G) Laying granite block paving with gravel joints.

(H) Laying flagging crosswalks with gravel joints.

(I) Furnishing and laying a 1½-inch wearing surface and a 1½-inch binder on existing concrete base and guaranteeing same for a period of ten (10) years after completion.

Repairing Asphalt Pavement.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
1 Repairing asphalt pavement.....	Warren Brothers Company.	Feb. 14, 1908	Completed.	\$15,000; wearing surface and bituminous binder, \$1.73 per square yard; extra bituminous binder, \$7.50 per cubic yard; concrete base, \$0.75 per square yard.....	\$15,793 81

1 These repairs are guaranteed for a period of three (3) years after completion.

Street Construction under Chapter 323 of Acts of 1891, or Special Acts or Amendments Thereto.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
¹ Harlem street, between Glenway and Greenwood streets.....	James Doherty.....	June 22, 1908	Completed Sept. 19, 1908....	\$1,788 60	\$1,799 77
¹ Larkin street, between Hampden and Adams streets.....	Wm. J. Rafferty Company..	June 22, 1908	Completed Aug. 15, 1908....	1,332 70	1,396 71
¹ Bernard street, between Talbot avenue and New England Railroad.....	William J. Barry.....	June 23, 1908	Completed Sept. 9, 1908....	5,868 65	5,541 88
¹ Corona street, between Bowdoin street and Geneva avenue.....	William J. Barry.....	June 23, 1908	Completed Oct. 14, 1908....	5,095 15	4,848 31
¹ Dakota street, between Geneva avenue and Greenbrier street.....	William J. Barry.....	June 23, 1908	Completed Oct. 15, 1908....	8,064 35	7,466 91
¹ Cotton street, between Walter and Fairview streets.....	Peter F. Connolly.....	July 3, 1908	Completed Oct. 22, 1908....	4,355 10	4,081 47
¹ Evergreen street, grading from South Huntington avenue about 443 feet easterly	Mark H. Lynch.....	Dec. 9, 1908	Unfinished.....	1,200 00	451 35
² Avenue Louis Pasteur.....	William J. Barry.....	Oct. 12, 1908	Unfinished.....	750 00	Nothing.
¹ Old Colony avenue and part of D and West Ninth streets, between Dorchester avenue and Dorchester street....	Fred S. & A. D. Gore Corporation.....	Oct. 1, 1908	Unfinished.....	21,109 20	3,756 79

¹ Advertised and awarded to lowest bidder. ² Without competition.

* Artificial Stone Sidewalks.

CONTRACTOR.	Dated.	Price per Square Foot.	Amount Expended in 1908.
Jeremiah J. Sullivan.....	May 1, 1908.....	\$0 06	\$655 86
Adam Pond Company, Incorporated.....	Sept. 19, 1908.....	06	324 84
Thomas J. Hind.....	May 11, 1908.....	06	1,637 10
W. A. Murfeldt Company.....	May 11, 1908.....	06	1,947 51
Simpson Brothers Corporation.....	May 12, 1908.....	06	940 22
Warren Brothers Company.....	May 4, 1908.....	06	1,547 16
Robert Eagar, Jr.....	July 10, 1908.....	06	446 16

* These walks are guaranteed by a surety company bond for ten (10) years from date of completion, and were laid on various public streets where the contractor had agreements with the abutters. The price, 6 cents per square foot, is equivalent to the expense to the city for one-half the cost of a brick sidewalk.

Repairing Artificial Stone Sidewalks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
¹ Repairing artificial stone side- walks	Jeremiah J. Sullivan.....	June 8, 1908	.....	Less than 25 square feet, \$10; 25 to 100 square feet, 30c. per square foot; 100 to 500 square feet, 25c. per square foot; 500 square feet and over, 22c. per square foot.	\$655 86

¹ Invitation bids and awarded to lowest bidder.

Furnishing and Laying Artificial Stone Sidewalks.†

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
*1 Samoset street, between Centre street and Welles avenue.....	Jeremiah J. Sullivan.....	May 26, 1908	Completed June 24, 1908.	7,650 square feet @ \$0.175.....	\$1,338 40
*1 Park View street, between Hutchings and Seaver streets.....	Robert Eagar, Jr.	May 26, 1908	Completed July 7, 1908.	3,470 square feet @ 0.175.....	833 53
² Bay State road at No. 191, repairing sidewalk	Simpson Bros. Corporation . .	May 1, 1908	Completed.	.....	77 00
† ¹ Gainsborough street, between St. Stephen and Hemenway streets.....	Robert Eagar, Jr.	June 29, 1908	Completed Aug. 10, 1908.	5,370 square feet @ 0.135	704 57
*1 Norton street, between Bowdoin and Speedwell streets.....	W. A. Murtfeldt Company.....	July 15, 1908	Completed Aug. 31, 1908.	6,020 square feet @ 0.1665	1,007 99
*1 South Huntington avenue, between Huntington avenue and Heath street,	Simpson Bros. Corporation....	July 17, 1908	Completed Aug. 3, 1908.	1,735 square feet @ 0.1675 ...	292 96
*1 Cotton street, between Walter and Fairview sts.	Thomas A. Nolan.....	July 23, 1908	Completed Sept. 24, 1908.	6,460 square feet @ 0.16	1,095 70
*1 Corona street, between Bowdoin street and Geneva avenue.....	Jeremiah J. Sullivan.....	Sept. 3, 1908	Unfinished.	10,600 square feet @ 0.149	874 49
*1 Dakota street, between Greenbrier street and Geneva avenue.....	Jeremiah J. Sullivan.....	Sept. 16, 1908	Completed Nov. 28, 1908.	17,900 square feet @ 0.15	2,537 61
² Homestead street at No. 67, repairing sidewalk...	W. A. Murtfeldt Company....	Nov. 3, 1908	Completed.	.....	75 00
† ¹ Summer street, south side, between Melcher and A streets.....	Warren Bros. Company.....	Nov. 16, 1908	Unfinished.	3,330 square feet @ 0.175	217 00

* Laid in connection with the construction of the street, under chapter 323 of the Acts of 1891 and amendments.

† For additional items in this contract see Paving and Regulating.

‡ These walks are guaranteed by a surety company bond for ten (10) years from date of completion.

¹ Advertised and awarded to lowest bidder.² Without competition.

Paving and Regulating.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost as per Estimated Quantities, not Including Materials Furnished by the City.	Amount Expended in 1908.
† ¹ Gainsborough street, between St. Stephen and Hemenway streets	Robert Eagar, Jr.	June 29, 1908	Completed Aug. 10, 1908..	\$113 32	\$118 81
¹ Summer street, from bridge over A street to bridge over N. Y., N. H. & H. R. R.	James P. Collins	July 14, 1908	Completed Aug. 14, 1908..	812 80	810 40
¹ Eliot street, between Tremont street and Pleasant street	John I. Fitzgerald	Aug. 6, 1908	Completed Oct. 17, 1908..	8,908 05	6,972 95
¹ Kneeland street, between Washington street and Harrison avenue	John Donley Company	Aug. 6, 1908	Completed Oct. 14, 1908..	5,009 65	3,864 00
¹ A street, from Congress street to about 175 feet south of Binford street	Fred S. & A. D. Gore Corp.	Aug. 6, 1908	Completed Oct. 9, 1908..	22,755 30	23,138 57
¹ Scollay square and Court street, between Cornhill and Sudbury street	John I. Fitzgerald	Oct. 13, 1908	Completed Dec. 19, 1908..	11,171 70	9,631 43
¹ Bromfield street, between Tremont and Washington streets	John I. Fitzgerald	Oct. 14, 1908	Completed Nov. 9, 1908..	4,321 35	4,333 36
² Esmond street, between Blue Hill avenue and Bradshaw street	Daniel E. Lynch	Oct. 20, 1908	Completed Dec. 17, 1908..	528 50	*395 25
² Broad street, between Custom House street and India square	Daniel E. Lynch	Nov. 3, 1908	Completed Dec. 7, 1908..	605 00	* Nothing.
¹ Chelsea street, from 40 feet south of Scott's court to Chelsea Bridge South..	Cornelius J. Duggan	Nov. 9, 1908	Completed Dec. 4, 1908..	748 40	700 08
† ¹ Summer street, south side, between Melcher and A streets	Warren Bros. Corporation	Nov. 16, 1908	Unfinished	144 25	151 20
² Zeigler street, between Washington and Warren streets	Rudolph S. Blome Company . .	Oct. 12, 1908	Completed Nov. 18, 1908 ..	2,469 75	2,538 82

¹ Advertised and awarded to lowest bidder.
* Final payment not made.
² Without competition.
† For additional items in this contract see Furnishing and Laying Artificial Stone Sidewalks.

Sale of City Crushers.

CONTRACT.	Awarded to	Dated.	Amount to be Paid to the City.
¹ Exchange of crushed stone for all property owned by city at ledge lot, corner Grove and Centre streets, West Roxbury	Thomas F. Welch	June 2, 1908	*1,000 tons of crushed stone delivered in West Roxbury Dis- trict.
¹ Rosseter street crusher	P. F. Donovan	June 2, 1908	*\$1,550 00
¹ Day street crusher	Frederick Bleiler	June 2, 1908	*2,000 00
¹ Centre street crusher	Thomas F. Minton	June 2, 1908	*1,500 00
¹ Columbia road crusher	J. W. Mason	June 2, 1908	*3,815 00

¹ Advertised and awarded to highest bidder.

* Paid to the City of Boston.

Miscellaneous Agreements.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
² Six (6) gum-vending machines at ferry head-houses	Gum and Sweetmeat Co.	Feb. 6, 1908	Completed.	*\$250	*\$250 00
² Four (4) weighing machines at ferry head-houses	Nat. Automatic Machine Co.	Feb. 8, 1908	Completed.	*\$250	*250 00
¹ Kenney ledge lot, furnishing filling, ² Repairing ferryboat "General Sumner"	Patrick F. Donovan	Feb. 14, 1908	Completed Aug. 29, 1908.	\$1,947	1,536 81
² Retubing boiler, road roller, Child street yard	William McKie	April 21, 1908	Completed.	\$525	525 00*
	Daniel Russell Boiler Works, Inc.	April 21, 1908	Completed.	\$80	80 00

² Repairing double tipcart, East Boston yard.....	Healy Wagon Company....	April 29, 1908	Completed.	\$49.50	49 50
¹ Teaming edgestone and flagging from the South End yard....	S. & R. J. Lombard.....	May 1, 1908	Completed.	\$0.07 per linear foot	1,125 91
¹ Removing abutments and wing walls, D Street Bridge	William L. Miller.....	May 20, 1908	Completed.	*\$51	*51 00
² Blagden street, tarvia treatment..	Barrett Manufacturing Co..	June 19, 1908	Completed.	\$105 and crushed stone required at \$1.55 per ton	105 00
² Exeter street, between Newbury street and Commonwealth avenue, tarvia treatment.....	Barrett Manufacturing Co..	June 19, 1908	Completed.	\$63 for 900 square yards or under and 14 tons crushed stone at \$1.55 per ton.....	Nothing.
² Exeter street, between Boylston street and Huntington avenue, tarvia treatment.....	Barrett Manufacturing Co..	June 19, 1908	Completed.	\$72	\$72 00
² Blue Hill ave., east side, from Franklin Field to Mattapan, tarvia treatment.....	Barrett Manufacturing Co..	June 18, 1908	Completed.	At \$0.04 per square yard.....	1,186 52
² Brewer street, relaying tar concrete sidewalks at No. 4.....	Simpson Bros. Corporation..	June 20, 1908	Completed.	\$35.....	35 00
² Hyde square, relaying tar concrete around grass plot.....	Simpson Bros. Corporation..	June 20, 1908	Completed.	\$190.....	190 00
¹ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 7, Roxbury.....	Mrs. Mary Doyle	June 19, 1908	Completed.	Single team, \$3.15, double team, \$4.48, extra men, \$2.....	†1,988 62
² Waldeck street, between Geneva avenue and Park street, repairing tar concrete sidewalk	Simpson Bros. Corporation..	July 20, 1908	Completed.	\$478.....	847 00
¹ Furnishing single and double teams and extra men in the Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 10, North and West Ends..	Bernard E. Grant.....	July 22, 1908	Completed.	Single team, \$3, double team, \$4.85, extra men, \$2.....	†\$1,522 63
¹ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 9, Back Bay	John A. Janse	July 22, 1908	Completed.	Single team, \$3, double team, \$4.90, extra men, \$2.....	†3,732 50

¹ Advertised and awarded to lowest bidder.² Without competition.

● * Paid to the city.

† Paving.

Miscellaneous Agreements.—*Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
¹ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 5, West Roxbury.....	James E. Noble	July 22, 1908	Completed.	Single team, \$3.50, double team, \$5.50, extra men, \$2.25.....	*4,042 25
¹ Building retaining wall in Terrace street, Roxbury	James Doherty	July 24, 1908	Completed Aug. 10, 1908.	\$396.50	448 10
¹ Furnishing single and double teams and extra men in Paving, Sanitary, Street Cleaning and Sewer Divisions in District No. 1, South Boston.....	David D. McDermott	July 28, 1908	Completed.	Single team, \$3.20, double team, \$5.35, extra men, \$2.15.....	*936 48
² Repairing stone crushing screen at Paving Division yard, Brighton,	Daniel Russell Boiler Works, Inc.....	July 25, 1908	Completed.	\$95.....	95 00
² Saratoga street, between Boston, Revere Beach & Lynn Railroad and the Winthrop line. Treating with "Rotar".....	American Tar Company	July 27, 1908	Completed.	\$0.049 per square yard.....	581 88
¹ Furnishing double and single teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 8, South End.....	John Collins	Aug. 12, 1908	Completed.	Single team, \$3.15, double team, \$4.50, extra men, \$2.....	*3,086 10
¹ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts Nos. 2 and 3, East Boston and Charlestown	J. P. O'Riorden	July 28, 1908	Completed.	Single team, \$3.25, double team, \$5.50, extra men \$2.25	*1,414 12
¹ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts Nos. 6 and 12, Dorchester.....	John T. Keogh & Bros	July 30, 1908	Completed.	Single team, \$3.25, double team, \$5, extra men, \$2 per day.....	*3,515 88

¹ Furnishing single and double teams and extra men in the Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 4, Brighton.....	Joseph McGreevey.....	Aug. 4, 1908	Completed.	Single team, \$3, double team, \$4.90, extra men, \$2 per day.....	*4,181 96
² Installation and service of one extra telephone bell at East Eagle street yard.....	New Eng. Tel. & Tel. Co.....	Aug. 25, 1908	Completed.	\$1.50 per year.....	1 50
² Insuring five automobiles against liability for personal injury.....	The General Accident Fire and Life Assurance Corporation, Ltd.....	Sept. 11, 1908	Completed.	\$162 per year.....	162 00
² Insuring Reo automobile against fire and damage.....	Federal Insurance Company.	Sept. 11, 1908	Completed.	\$25 per year.....	25 00
² Insuring Stevens, Duryea automobile against fire and damage.....	Federal Insurance Company.	Sept. 11, 1908	Completed.	\$37.50 per year.....	37 50
² Furnishing stone at the Dimock street crusher.....	Patrick F. Donovan.....	Oct. 9, 1908	Completed.	\$1,500.....	1,949 28
² Furnishing and installing Mason safety treads at the Traverse Street Subway, Haverhill street,	American Mason Safety Tread Company.....	Oct. 20, 1908	Completed.	\$162.65.....	162 65
² Furnishing and installing hot water heater at East Boston paving yard.....	Lynn & Murphy.....	Oct. 26, 1908	Completed.	\$90.....	92 80
¹ Removing snow and ice in Snow District No. 1.....	John C. Coleman & Son.....	Dec. 11, 1908	Unfinished.	\$0.38 per cubic yard.....	Nothing.
¹ Removing snow and ice in Snow Districts Nos. 2, 3, 4, 5.....	Charles J. Jacobs Company..	Dec. 11, 1908	Unfinished.	District No. 2, \$0.30 per cubic yard..... District No. 3, .35 per cubic yard..... District No. 4, .50 per cubic yard..... District No. 5, .50 per cubic yard.....	\$323 10 444 15 699 00 192 50

¹ Advertised and awarded to lowest bidder.² Without competition.

* Paving.

CONTRACTS IN FORCE MADE IN PREVIOUS YEARS.
Paving with Trinidad Asphalt.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
¹ Cooper street, from Washington Street North, across Endicott street.....	Barber Asphalt Paving Co...	June 20, 1907	Completed Sept. 19, 1908.	(B) 680 square yards @ \$2 50.. \$1,700 00 (C) 4 cubic yards @ 5 00.. 20 00 (D) 50 square yards @ 1 05.. 52 50 (E) 1 cubic yard @ 9 00.. 9 00 (G) 330 linear feet @ 0 21.. 69 30 (H) 180 square yards @ 0 35.. 63 00 (I) 15 square yards @ 0 50.. 7 50	2,527 95
¹ Vernon street, from Cabot street across Auburn street.....	Barber Asphalt Paving Co..	Oct. 30, 1907	Completed Nov. 30, 1907.	(A) 2,120 square yards @ \$3 25.. \$6,890 00 (B) 10 square yards @ 2 50.. 25 00 (D) 30 square yards @ 1 05.. 31 50 (F) 2,140 square yards @ 0 50.. 1,070 00 (G) 440 linear feet @ 0 21.. 92 40 (H) 360 square yards @ 0 35.. 126 00 (I) 15 square yards @ 0 65.. 9 75 (J) 20 square yards @ 1 00.. 20 00	\$8,264 65
					\$1,685 48

¹ Awarded without competition.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying a 6-inch Portland cement concrete base, a 1½-inch wearing surface and a 1½-inch binder, and guaranteeing the same for a period of ten (10) years after completion.
- (B) Furnishing and laying a 1½-inch wearing surface and a 1½-inch binder on existing concrete base and guaranteeing the same for a period of ten (10) years after completion.
- (C) Laying extra concrete base.
- (D) Laying granite block paving and crosswalk flagging with pitch joints on a concrete base.
- (E) Furnishing and laying extra bituminous binder.
- (F) Excavating for sub-grading, including paving blocks barred up.
- (G) Excavating and setting edgestones.
- (H) Excavating and laying brick sidewalks.
- (I) Laying granite block paving and crosswalk flagging, gravel joints, on a gravel base.
- (J) Laying a 6-inch Portland cement concrete base for paving.

Paving with Wood Blocks.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
¹ Park square, from southerly line of Boylston street to southerly line of Eliot street.....	U. S. Wood Preserving Co..	May 28, 1907	Completed Nov. 13, 1907.	(A) 5,330 square yards @ \$3 25.. \$17,322 50 (B) 4,220 square yards @ 1 00.. 4,220 00 (C) 180 square yards @ 1 20. 216 00 (D) 4,220 square yards @ 0 50.. 2,110 00 (E) 680 linear feet @ 0 21.. 142 80 (F) 700 square yards @ 0 35.. 24 00 (G) 60 square yards @ 0 65.. 35 00 \$24,295 30	\$4,984 34
¹ Summer street, between Washington and Hawley streets....	U. S. Wood Preserving Co..	May 28, 1907	Completed Oct. 19, 1908.	(A) 1,010 square yards @ \$3 25.. \$3,282 50 (B) 700 square yards @ 1 00.. 700 00 (C) 37 square yards @ 1 05.. 38 85 (D) 740 square yards @ 0 50.. 370 00 \$4,391 35	\$3,336 95
¹ West street, between Washington and Tremont streets.....	U. S. Wood Preserving Co..	Sept. 18, 1907	Completed Sept. 23, 1908.	(A) 1,180 square yards @ \$3 25.. \$3,835 00 (B) 230 cubic yards @ 6 00.. 1,380 00 (D) 1,180 square yards @ 0 50.. 590 00 (E) 35 linear feet @ 0 21.. 7 35 (F) 25 square yards @ 0 35.. 8 75 \$5,821 10	\$5,933 32
¹ Church street, between Boylston and Providence streets.....	U. S. Wood Preserving Co..	Nov. 19, 1907	Completed Nov. 13, 1908.	(A)* 445 square yards @ \$3 25.. \$1,446 25 (B) 445 square yards @ 1 00.. 445 00 (D) 445 square yards @ 0 50.. 222 50 (E) 230 linear feet @ 0 21.. 48 30 (F) 140 square yards @ 0 35.. 49 00 \$2,211 05	\$2,216 00

¹ Awarded without competition.

Paving with Wood Blocks — Concluded.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
Providence street, from the west side of Church street 170 feet easterly.....	U. S. Wood Preserving Co..	Nov. 19, 1907	Completed Nov. 25, 1908.	(A) 430 square yards @ \$3 25.. \$1,397 50 (B) 446 square yards @ 1 00.. 446 00 (C) 16 square yards @ 1 05.. 16 80 (D) 446 square yards @ 0 50.. 223 00 (E) 300 linear feet @ 0 21.. 63 00 (F) 140 square yards @ 0 35.. 49 00 (G) 20 square yards @ 0 65.. 13 00	\$2,705 07

¹ Awarded without competition.

EXPLANATION OF LETTERS.

- (A) Furnishing and laying wood block paving and guaranteeing the same for a period of ten (10) years after completion.
- (B) Concrete base for wood block paving and crosswalks and brows.
- (C) Granite block paving and crosswalks with pitch joints on a concrete base.
- (D) Excavating for subgrade, including paving blocks barred up.
- (E) Excavating and setting edgestones.
- (F) Excavating and laying brick sidewalks.
- (G) Granite block paving and crosswalk flagging, gravel joints, on a gravel base.

Street Construction under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto; and also under Chapter 393 of the Acts of 1906.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Cost of Contract, as per Estimated Quantities, not Including Materials Furnished by the City.	Amount Expended in 1908.
Mapleton street, between Market and Murdock streets.....	Coyle & Clark.....	July 6, 1907	Completed June 27, 1908..	\$2,800 00	\$1,094 33
² Willowwood street, between Norfolk street and Lauriat avenue.....	Joseph J. Comfrey.....	July 27, 1907	Completed Nov. 30, 1907..	4,202 60	284 79
* ² Claybourne street, between Bowdoin and Dakota streets.....	S. Connolly.....	Aug. 1, 1907	Completed Nov. 26, 1907..	1,021 00	201 69
* ² Fottler road, between Walk Hill street and Tileston avenue.....	Fred L. Williams.....	Sept. 3, 1907	Completed Nov. 27, 1907..	1,326 50	349 73
¹ Mallet street, between Florida and Adams streets.....	Timothy F. Bradley.....	Sept. 3, 1907	Completed May 19, 1908..	2,100 00	330 65
¹ Causeway street, between Medford street and Washington Street North.....	William H. Cuddy.....	Sept. 12, 1907	Completed Dec. 5, 1907..	5,300 00	535 04
¹ Hobson street, between Faneuil and Hobart streets.....	Thomas J. Young Co.....	Sept. 14, 1907	Completed Dec. 13, 1907..	3,200 00	87 84
³ Bayswater street, between Saratoga street and Austin avenue.....	James Doherty.....	Oet. 8, 1907	Completed April 2, 1908..	4,652 87	648 39
³ Kilton street, between Harvard and Park streets.....	Philip Doherty.....	Oet. 8, 1907	Completed May 6, 1908..	1,868 10	1,539 49
³ Rockledge street, between Lambert avenue and Thornton street.....	Robert Eagar, Jr.	Oet. 8, 1907	Completed Dec. 2, 1907..	841 50	211 29

¹ Awarded without competition.

² Not advertised, invited bids awarded to lowest bidder.

³ Advertised and awarded to lowest bidder.

* Fottler road was awarded to second lowest bidder at modified prices.
Claybourne street was awarded to fifth lowest bidder at modified prices.

Street Construction.—*Concluded.*

CONTRACT.	Awarded to	Dated.	Progress of Work.	Cost of Contract, as per Estimated Quantities, not Including Materials Furnished by the City.	Amount Expended in 1908.
¹ Speedwell street, between Topliff and Hamilton streets.....	William Barrett.....	Oct. 9, 1907	Completed May 26, 1908..	\$1,579 10	\$420 85
¹ Larchmont street, between Waldeck and Greenbrier streets.....	D. E. Coleman Company.	Nov. 1, 1907	Completed July 17, 1908..	2,919 25	2,866 51
¹ Norton street, between Bowdoin and Speedwell streets.....	D. E. Coleman Company.	Nov. 1, 1907	Completed July 20, 1908..	1,726 40	1,405 69
¹ Samoset street, between Centre street and Welles avenue.....	D. E. Coleman Company.	Nov. 1, 1907	Completed June 29, 1908..	2,193 50	1,250 63
¹ Parkview street, between Seaver and Hutchings streets.....	Robert L. Barrett.....	Nov. 11, 1907	Completed July 14, 1908..	1,414 80	850 21
¹ Bruce street, between Dracut and Wrentham streets.....	Daniel E. Lynch.....	Nov. 11, 1907	Completed Sept. 2, 1908..	517 90	468 89
¹ South Huntington avenue, between Huntington avenue and Heath street.....	William J. Barry.....	Nov. 13, 1907	Completed June 20, 1908..	5,223 60	6,687 86
¹ Cottage street, between Maverick and Gove streets.....	James Doherty.....	Nov. 14, 1907	Completed May 28, 1908..	2,297 00	2,363 57
¹ Frankfort street, between Maverick and Gove streets.....	James Doherty.....	Nov. 14, 1907	Completed May 29, 1908..	2,507 60	2,599 88
¹ Ashland street, between Mill and Everdean streets.....	Philip Doherty.....	Nov. 19, 1907	Completed June 18, 1908..	983 00	531 97
¹ Everdean street, between Green Hill and Preston streets.....	Philip Doherty.....	Nov. 19, 1907	Completed June 20, 1908..	1,454 20	1,665 08
¹ Norwood street, from Tolman street 444 feet northwesterly.....	Philip Doherty.....	Nov. 19, 1907	Completed May 22, 1908..	1,740 60	1,619 14
¹ Bellevue street, between Hamilton and Kane streets.....	John McCourt.....	Nov. 23, 1907	Completed July 16, 1908..	1,729 60	1,788 52
¹ Everdean street, between Ashland and Green Hill streets.....	J. W. Collins.....	Nov. 29, 1907	Completed June 20, 1908..	1,370 50	833 03

¹ Advertised and awarded to lowest bidder.

Furnishing and Laying Artificial Stone Sidewalks.†

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
* 1 Speedwell street, between Top-liff and Hamilton streets.....	Warren Bros. Company.....	Oct. 31, 1907	Completed May 16, 1908.	6,645 square feet @ \$0 20.. \$1,329 00.....	\$771 00
* 1 Mallet street, between Florida and Adams streets.....	Simpson Bros. Corporation..	Nov. 14, 1907	Completed Oct. 24, 1908.	6,215 square feet @ 0 20.. 1,243 00.....	765 95
* 1 Larchmont street, between Waldeck and Greenbrier sts..	Warren Bros. Company.....	Nov. 29, 1907	Completed July 14, 1908.	10,660 square feet @ 0 20.. 2,132 00.....	2,148 20

* Laid in connection with the construction of the street, under chapter 393 of the Acts of 1906.
† These walks are guaranteed by a surety company bond for ten (10) years from date of completion.
1 Awarded without competition.

Lease of Land, etc.

CONTRACT.	Awarded to	Dated.	Expires.	Estimated Cost.	Amount Expended in 1908.
* 1 Lease of wharf, etc., at Revere street,	J. J. Costello.....	July 20, 1899	July 20, 1909	\$6,500 per year and all taxes during the first five years, and \$7,250 per year and all taxes during the second five years.....	\$3,625 00
1 Lease of a portion of Glendon Wharf and stable on said wharf.....	Blodgett & Whidden.....	May 14, 1900	May 14, 1910	\$3,000 per year and all taxes for ten years.....	3,000 00

* One-half paid by the Sewer Division.
1 Awarded without competition.

Quarrying and Cutting Stone, etc.

CONTRACT.	Awarded to	Dated.	Expires.	Estimated Cost.	Amount Expended in 1908.
¹ Quarrying stone from ledge on Centre street, between Allandale and Walter streets.....	Thomas F. Minton.....	Sept. 4, 1906	Canceled December 3, 1906,	Over \$2,000; 70 cents per ton for stone or strippings delivered; labor, standard rate; teams, established rates.....	Nothing.
¹ Quarrying and crushing stone from ledge on Centre street, corner of Grove street, West Roxbury.....	Thomas F. Welch.....	Oct. 2, 1906	Canceled December 27, 1907,	Over \$2,000; \$1.25 per ton for stone crushed; labor, standard rate; teams, established rates.....	Nothing.
¹ Quarrying, cutting and crushing stone from ledge on Centre street, corner Grove street, West Roxbury.....	Thomas F. Welch.....	April 2, 1907	Canceled December 27, 1907,	Crushing, \$1.25 per ton; strippings de- livered, 70 cents per ton; teams, estab- lished rates.....	Nothing.
¹ Quarrying and cutting stone at the ledge on Columbia road.....	James A. Mahan.....	Sept. 3, 1907	Canceled January 3, 1908,	Over \$2,000; stone or strippings delivered, 70 cents per ton; labor, \$2 per day; teams, established rates.....	\$5,749 89
Quarrying and cutting stone at the Chestnut Hill avenue ledge.....	Coyle & Clark.....	Oct. 11, 1907	Canceled January 6, 1908,	Over \$2,000; stone or strippings delivered, 70 cents per ton; labor, \$2 per day; teams, established rates.....	5,816 47

¹ Awarded without competition.

Paving and Regulating.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Cost of Contract, as per Estimated Quantities, not Including Material Furnished by the City.	Amount Expended in 1908.
¹ Walk Hill street, between Blue Hill avenue and Almont street.....	Mark H. Lynch.....	Sept. 19, 1907	Completed Nov. 21, 1907....	\$1,125 00	\$180 06
¹ Dorchester avenue, between Adams and Park streets.....	Daniel E. Lynch.....	Oct. 19, 1907	Completed Dec. 4, 1907....	1,750 00	185 87
¹ D street, between West Fifth and West Seventh streets.....	William Higgins.....	Oct. 30, 1907	Completed Dec. 30, 1907....	1,550 00	270 02
¹ Shawmut avenue, between Lenox and Sawyer streets.....	Daniel H. Shea.....	Nov. 1, 1907	Completed Nov. 27, 1907....	1,050 00	61 04
¹ Rutherford avenue, from Essex street to about 25 feet east of Baldwin street.....	James J. Brock.....	Nov. 7, 1907	Completed Dec. 3, 1907....	1,975 00	260 58
¹ Worthington street, in front of Normal School.....	Charles W. Kinney.....	Nov. 11, 1907	Completed May 16, 1908....	1,900 00	1,369 62
¹ Melcher street, from Summer street 484 feet southeasterly.....	Peter W. Hill.....	Nov. 22, 1907	Completed Dec. 9, 1907....	1,650 00	292 37
¹ East Sixth street, south side, between O and P streets.....	Peter J. Herr, Jr.....	Nov. 23, 1907	Completed Dec. 28, 1907....	875 00	112 72
¹ Dorchester street, from West First street 240 feet northerly.....	Suffolk Contracting Co....	Nov. 27, 1907	Completed Dec. 26, 1907....	850 00	472 74
¹ Boynton street, between South and Call streets.....	George H. Noone.....	Nov. 30, 1907	Completed Sept. 21, 1908....	1,050 00	964 60
¹ D street, between Gold street and Broadway..	William Higgins.....	Dec. 2, 1907	Completed Aug. 21, 1908....	1,900 00	1,531 33
¹ Washington street, west side, between Cliff and Bartlett streets.....	Peter Gilligan.....	Dec. 2, 1907	Completed Aug. 24, 1908....	1,275 00	1,107 33
¹ Rutherford avenue, between Baldwin and Thorndike streets.....	James J. Brock.....	Dec. 5, 1907	Completed Sept. 23, 1908....	2,024 00	1,966 08
¹ Lawn street, from Heath street to another part of Heath street.....	Trimount Contracting Co.	Dec. 10, 1907	Completed Sept. 26, 1908....	1,625 00	1,525 80

¹ Awarded without competition.

Leasing Ledge Lots.,

CONTRACT.	Lessor.	Dated.	Expires.	Estimated Cost.	Amount Expended in 1908.
* ¹ Lease of land on Kenney street, near Day street.....	James W. Kenney.....	Sept. 5, 1906	Jan. 31, 1908	\$200 per month rent; 17 cents per ton for stone removed.....	\$1,000 00
¹ Lease of ledge on Centre street, between Allandale and Walter streets.....	Thomas Minton.....	Sept. 4, 1906	Feb. 1, 1908	\$7,500; 18 cents per ton for stone removed.....	30 16
¹ Lease of ledge on Columbia road, near Brunswick street.....	W. J. Wilcox <i>et al.</i>	Dec. 29, 1906	March 22, 1908	\$6,250; 12½ cents per ton for stone removed.....	656 13

* \$200 per month from February 1, 1906.

¹ Awarded without competition.

Miscellaneous Agreements.

CONTRACT.	Awarded to	Dated.	Progress of Work.	Estimated Cost.	Amount Expended in 1908.
¹ Old Road, Dorchester, earth and rock excavation.....	James F. Murphy.....	Oct. 19, 1907	Completed Feb. 1, 1908...	\$2,850 00	\$1,595 26
¹ Hano street, Braintree street 420 feet south-erly, relaying tar concrete walks.....	Simpson Bros. Corp.....	Nov. 21, 1907	Completed Dec. 19, 1907...	575 00	575 00
¹ Harvard street, Dorchester, erecting wood fence at bridge.....	P. J. Dinn & Co.....	Dec. 23, 1907	Completed Jan. 7, 1908...	110 00	110 00
¹ Asphaltting carriage wash in stable at Jamaica Plain yard.....	Simpson Bros. Corp.....	Dec. 31, 1907	Completed Jan. 18, 1908...	125 00	125 00

¹ Awarded without competition.

APPENDIX E.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE SANITARY DIVISION.

ROOMS NOS. 917-920, TREMONT BUILDING,
BOSTON, MASS., February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

DEAR SIR, — I hereby respectfully submit the annual report of the expenditures, income and operation of the Sanitary Division of the Street Department for the financial year ending January 31, 1909.

Respectfully submitted,

GEORGE H. FOSS,

Deputy Superintendent.

On July 1, 1908, the collection of ashes in the East Boston district was let by contract. On July 15 the collection of ashes in the Brighton district was let by contract.

On July 15, 1908, the carrying capacity of the ash carts was increased from fifty-four cubic feet to sixty-three cubic feet.

The City Ordinances of 1892, chapter 36, require that house dirt and ashes and house offal shall be kept in an easily accessible place for their removal, the men being obliged to enter the yards and remove the receptacles to the sidewalk, where their contents are dumped into the carts. The receptacles are then placed in their original position.

Ordinance of 1907, chapter 4: The Sanitary Division shall remove house offal, house dirt and such ashes as are the product of burning materials for heating habitations, cooking and other domestic purposes and all other noxious and refuse substances from yards and areas when so placed as to be easily removed.

During the year six (6) new winged carts were built by the Sanitary Division, having a carrying capacity of eighty-seven cubic feet each.

The scarcity of low land available for dumping purposes has greatly increased the cost of collection. The division is now paying for dumping privileges at the rate of ten (10) cents per load in East Boston, Charlestown, Roxbury, the South End and Cambridge.

The division also has charge of the construction and repairs of carriages, carts, wagons and harnesses, etc., for this and other divisions and departments.

FINANCIAL STATEMENT.

Amount of appropriation	\$750,000 00
Paid by Fire Department (through City Collector),	329 00
	<u>\$750,329 00</u>
Transferred to Street Cleaning and	
Watering Division	\$3,905 31
Transferred to Ferry Division	1,272 79
	<u>5,128 10</u>
Total amount of appropriation	<u>*\$745,200 90</u>
Total expenditures of the Sanitary Division,	
including work done for other divisions and	
departments and paid by them	\$786,089 78
Less amounts paid by other divisions and depart-	
ments	40,888 88
	<u>\$745,200 90</u>
Net cost of maintenance, Sanitary Division	<u>\$745,200 90</u>
TOTAL COST ON HOUSE DIRT, ASHES, WASTE AND RUBBISH	
AND HOUSE OFFAL.	
Salaries: Deputy superintendent and office force,	\$10,067 05
Office supplies and expenses	5,448 04
Ashes, waste and rubbish account	494,254 20
House offal account	227,431 91
	<u>\$737,201 20</u>
CONSTRUCTION, REPAIR AND HORSESHOEING	
ACCOUNT.	
Foremen	\$1,357 84
Expended for labor	32,005 48
Expended for stock	15,525 26
	<u>48,888 58</u>
Total expenditures of the Sanitary Division for	
the fiscal year ending January 31, 1909	\$786,089 78

* Of this sum, \$3,945.96, for miscellaneous credits, is not carried into tables, page 304 and facing the same.

REVENUE RECEIVED FROM OUTSIDE DIVISIONS
FOR BOARD AND CARE OF HORSES, RENT, USE
OF DUMPING BOATS, SHOEING AND FOR
REPAIRING VEHICLES, ETC.

Bridge Division	\$314 33	
County of Suffolk	1,877 14	
Lamp Division	443 08	
Paving Division	9,358 51	
Sewer Division	4,575 81	
Street Cleaning and Watering Division	24,267 01	
Supply Department	53 00	
		\$40,888 88
Net cost of maintenance to Sanitary Division .		<u>\$745,200 90</u>

Amount of money deposited and bills presented to the City Collector during the year ending January 31, 1909, for general revenue :

MONEY DEPOSITED.

From letting of scow privileges	\$4,448 54
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BILLS PRESENTED.

For the collection of engine ashes .	\$12,675 65	
Less bills withdrawn	118 50	
		\$12,557 15
For rents, Fort Hill and Hecht's wharves	1,104 00	
For sale of manure	119 93	
For repair work for Fire Depart- ment	*329 00	
		14,110 08
		<u>\$18,558 62</u>

* This amount was added to the appropriation.

Items of Expenditure for the Year.

ITEMS.	Total Amount Expended.
Salaries of deputy superintendent and office force.....	\$10,067 05
Salaries of foremen.....	11,298 54
Labor—collection and disposition of house dirt and ashes,	226,672 30
Labor—collection and disposition of waste and rubbish.	37,407 00
Labor—collection and disposition of house offal.....	149,473 04
Labor and stock in stables and yards.....	46,051 03
Hired teams on ashes, waste and rubbish and house offal..	45,529 00
Contracts on ashes—East Boston, Brighton, West Rox- bury, North Dorchester and South Dorchester.....	42,418 57
Contracts on offal—East Boston, Brighton, West Rox- bury and Dorchester.....	33,563 35
Ash and offal stock.....	505 97
Allowed time and holidays.....	23,759 45
Grain.....	33,503 03
Hay and straw.....	23,538 31
Medical attendance and allowed time on account of injured men.....	165 00
Horses.....	5,415 00
Veterinary services and medicine.....	3,162 29
Hired horses.....	4,275 00
Outside board and care of horses.....	3,055 29
Outside horseshoeing, blacksmith, wheelwright, harness and painting.....	4,576 68
Labor, stock, etc.—wheelwright, blacksmith, paint, har- ness and horseshoeing shops.....	44,261 20
Dumping boats, stock, etc.....	121 19
Repairs on stables, sheds, wharves and boats.....	7,628 95
Fuel.....	1,252 54
Gas.....	1,053 41
Electric lighting and power.....	1,169 63
Printing, stationery, office items and incidentals.....	6,981 36
Advertising.....	501 14
Rents.....	12,539 04
Tolls and fares.....	53 49
Telephones.....	1,042 08
Damages caused by teams.....	52 00
Taxes on Hecht's estate, as per lease.....	4,997 85
Total.....	\$786,089 78
Amounts paid by other departments and divisions.....	40,888 88
Amount charged to the Sanitary Division.....	\$745,200 90

Amount of House Dirt and Ashes Removed.

YEARS.	Number of Loads at 54 Cubic Feet.	Cubic Yards.	Tons. (2,000 lbs.)
1904.....	325,955	651,910	260,764
1905.....	321,545	643,090	257,236
1906.....	352,124	704,248	281,699
1907.....	377,058	754,116	301,647
1908.....	*339,913	745,918	311,586

* Loads increased to sixty-three cubic feet July 15, 1908.

Force Employed on House Dirt and Ashes January 31, 1909.

CITY FORCE.	Number.	Hired Teams.	CONTRACTORS' TEAMS.					Total.
			East Boston.	Brighton.	West Roxbury.	North Dorchester.	South Dorchester.	
Inspectors.....	25	.....	.....	.....	.....	.....	.....	25
Teamsters.....	127	5	4	6	3	11	6	162
Helpers.....	130	5	10	6	5	25	15	196
Dumpers.....	24	.....	.....	.....	.....	.....	.....	24
Totals.....	306	10	14	12	8	36	21	407

Amount of Waste and Rubbish Removed.

YEARS.	NUMBER OF LOADS.		Cubic Yards.	Tons. (2,000 lbs.)
	Paper Carts.	Market Wagons.		
1904.....	7,064	9,170	101,616	11,431
1905.....	6,569	10,540	108,596	12,387
1906.....	6,271	11,133	125,281	12,836
1907.....	6,098	11,071	112,960	12,708
1908.....	5,892	10,346	123,839	13,566

Force Employed on Waste and Rubbish January 31, 1909.

CITY FORCE.	Number.
Inspectors.....	2
Teamsters.....	13
Helpers.....	25
Dumpers.....	1
Total.....	41

Amount of House Offal Removed.

YEARS.	Number of Loads.	Cubic Yards.	Tons. (2,000 lbs.)
1904.....	64,084	128,168	64,084
1905.....	64,803	129,606	64,803
1906.....	65,387	130,774	65,387
1907.....	64,712	129,424	64,712
1908.....	62,892	125,784	78,615

Force Employed on House Offal January 31, 1909.

CITY FORCE.	Number.	CONTRACTORS' TEAMS.				Total.
		East Boston.	Brighton.	West Roxbury.	Dorchester.	
Inspectors.....	13	.....	.....	.....	.....	13
Teamsters.....	51	4	5	2	8	70
Helpers.....	50	4	3	2	14	73
Dumpers.....	4	.....	.....	.....	.....	4
Totals.....	118	8	8	4	22	160

Capacity of Carts and Wagons in Use by the Sanitary Division.

Cubic Feet.		Cubic Feet.	
Single ash carts	63	Single offal wagons . . .	55
Double ash carts	136	Double offal wagons . . .	85
Paper carts	106	Paper wagons.	219

WINTER WEIGHTS.

	Lbs.
Average weight of paper cart loads	1,000
Average weight of ash cart loads	2,300
Average weight of offal wagon loads	2,600
Average weight of paper wagon loads	1,800

SUMMER WEIGHTS.

	Lbs.
Average weight of paper cart loads	1,100
Average weight of ash cart loads	1,800
Average weight of offal wagon loads	2,500
Average weight of paper wagon loads	2,000

Number of Loads of Material Collected from February 1, 1904, to January 31, 1909.

YEAR.	Waste and Rubbish.	Ashes.	Offal.	Total Loads.	Total Tons. (2,000 lbs.)
1904.....	16,234	325,955	64,084	406,273	336,279
1905.....	17,109	331,545	64,803	413,457	334,426
1906.....	17,404	352,124	65,387	434,915	359,922
1907.....	17,169	377,058	64,712	458,939	379,067
1908.....	16,238	339,913	62,892	*419,043	403,767

The above includes the loads collected by the contractors on ashes and offal.
* Decrease in number of loads carried due to the increase in the carrying capacity of the carts.

Average Number of Employees and Horses Cared for by the Sanitary Division.

Average number of employees for 1908.....	.....	664
Average number of horses, Sanitary Division.....	248	
Average number of hired horses.....	12	
Average number of all other horses.....	29	
Average number of horses fed by the Sanitary Division..	.....	289

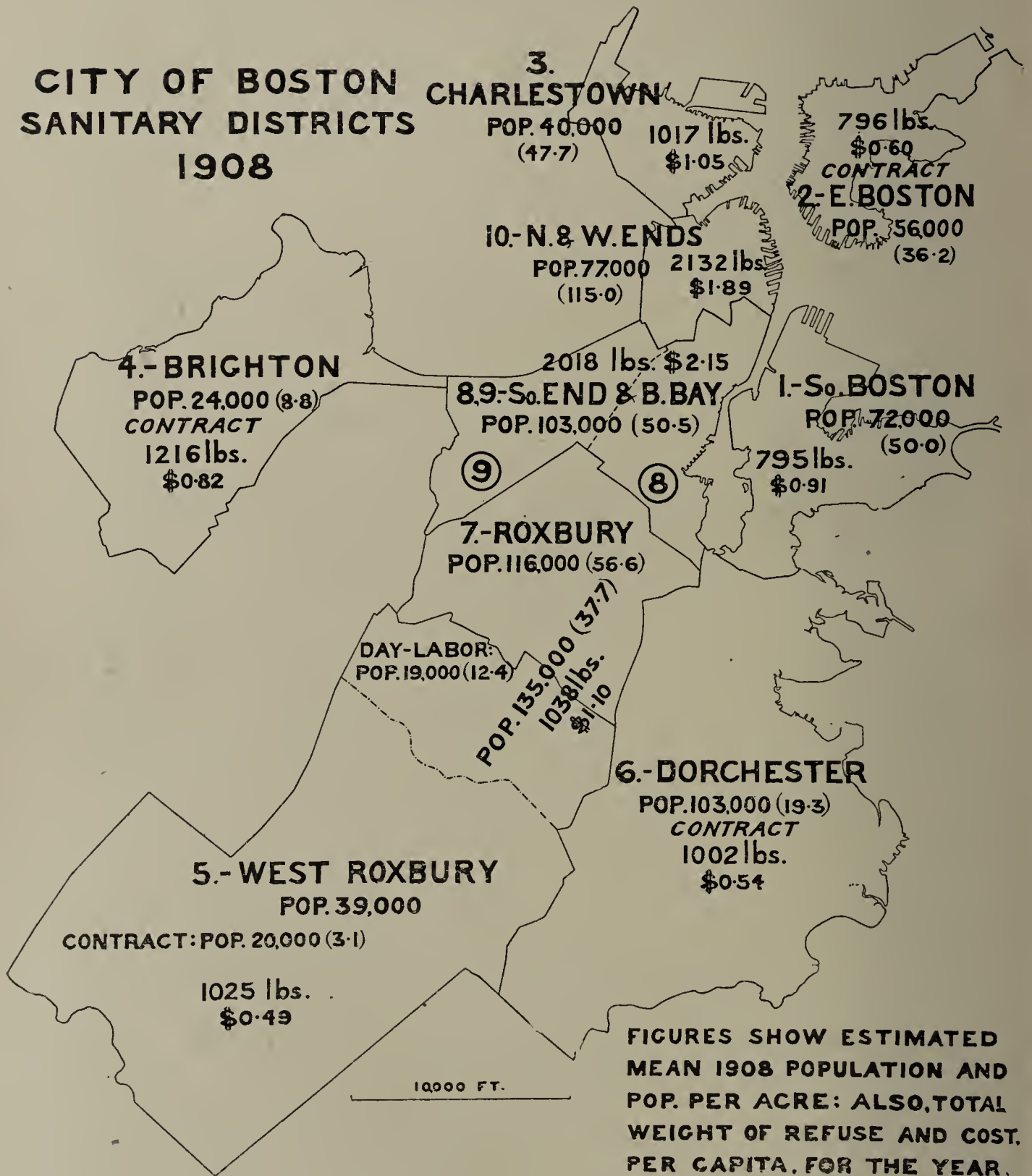
Loads Collected by Contractors.

	Ash Loads.	Cubic Yards.	Tons. (2,000 lbs.)
East Boston.....	8,736	17,470	8,010
Brighton.....	5,373	10,750	4,925
West Roxbury.....	8,747	17,460	8,018
North Dorchester.....	25,595	89,120	40,697
South Dorchester.....	18,803		
Totals.....	67,254	134,800	61,650
	Offal Loads.	Cubic Yards.	Tons. (2,000 lbs.)
East Boston.....	4,645	8,300	5,806
Brighton.....	2,500	4,470	3,125
West Roxbury.....	1,784	3,200	2,230
Dorchester.....	8,725	15,630	10,909
Totals.....	17,654	31,600	22,070

Loads of Material Collected by Districts.

	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester.	Roxbury.	South End and Back Bay.	North and West Ends.	Total Loads.	Total Tons. (2,000 lbs.)
House dirt and ashes.....	25,505	17,987	18,570	12,508	24,054	44,398	45,530	80,190	71,171	339,913	311,586
Waste and rub- bish.....	370	.....	.....	.....	.....	.....	602	8,872	6,394	16,238	13,566
House offal....	3,937	4,645	2,654	2,500	4,327	8,725	8,445	18,395	9,264	62,892	78,615
Totals.....	29,812	22,632	21,224	15,008	28,381	53,123	54,577	107,457	86,829	419,043	403,767

CITY OF BOSTON SANITARY DISTRICTS 1908



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Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year 1908-09.

District and Population.	CHARACTER OF REFUSE.	Tons. (2,000 lbs.)	Total Tons.	COST PER TON BY DISTRICTS.			COST BY DISTRICTS.						WHERE DISPOSED OF.
				To Collect.	For Disposal.	Total Collection and Disposal.	To Collect.	Total Cost to Collect.	For Disposal.	Total Cost of Disposal.	Total Cost of Collection and Disposal.	Total Cost per Capita, Collection and Disposal.	
1..... (72,000)	Mixed refuse, principally ashes (no kitchen refuse)...	23,379	.....	\$1 3697	\$0 4735	\$1 8432	\$32,021 90	.....	\$11,069 97	.....	.....	.....	Inland dumps.
	Store refuse, principally paper.....	315	.....	1 6143	2 2005	3 8148	508 50	.....	693 16	.....	.....	.....	City Refuse Utilization Company.*
	Garbage, principally kitchen wastes.....	4,920	.....	3 1567	1 1633	4 3200	15,531 03	.....	5,723 25	.....	.....	.....	New England Sanitary Product Company.*
			28,614	Av. \$1 6796	Av. \$0 6111	Av. \$2 2907							
2..... (56,000)	{ Ashes (from February 1, 1908, to July 1, 1908).....	8,480	8,480	1 8757	0 2057	2 0814	\$15,906 40	15,906 40	\$1,744 16	1,744 16	17,650 56	† 3152	Inland dumps.
3..... (40,000)	Mixed refuse, principally ashes (no kitchen refuse)...	17,025	.....	1 4833	0 1498	1 6331	\$25,253 59	.....	\$2,550 48	.....	.....	.....	Inland dumps.
	Garbage, principally kitchen wastes.....	3,317	.....	3 1840	1 1247	4 3087	10,561 34	.....	3,730 50	.....	.....	.....	New England Sanitary Product Company.*
			20,342	Av. \$1 7606	Av. \$0 3088	Av. \$2 0694							
4..... (24,000)	{ Ashes (from February 1, 1908, to July 15, 1908)....	6,540	6,540	1 2540	0 0945	1 3485	\$8,201 25	8,201 25	\$617 68	617 68	8,818 93	‡ 3675	Inland dumps.
5 (part) and 7 (135,000)	Mixed refuse, principally ashes (no kitchen refuse)...	55,766	.....	1 4480	0 1684	1 6164	\$80,748 82	.....	\$9,391 24	.....	.....	.....	Inland dumps.
	Store refuse, principally paper.....	580	.....	2 6054	.....	.....	1,511 10	.....	.....	.....	.....	.....	Inland dumps.
	Garbage, principally kitchen wastes.....	13,735	.....	2 9462	1 1447	4 0909	40,466 10	.....	15,723 00	.....	.....	.....	New England Sanitary Product Company.*
			70,081	Av. \$1 7512	Av. \$0 3584	Av. \$2 1096							
8 and 9 (103,000)	Mixed refuse, principally ashes (no kitchen refuse)...	73,506	.....	1 4980	0 0202	1 5182	\$110,109 76	.....	\$1,485 18	.....	.....	.....	62.95 per cent inland dumps; 37.05 per cent dumped at sea.
	Store refuse, principally paper.....	7,403	.....	3 1126	2 1834	5 2960	23,042 81	.....	16,163 54	.....	.....	.....	87.36 per cent City Refuse Utilization Company; 12.64 per cent inland dumps.*
	Garbage, principally kitchen wastes.....	22,993	.....	1 9439	1 1239	5 0678	44,696 49	.....	25,840 00	.....	.....	.....	New England Sanitary Product Company.*
			103,902	Av. \$1 7117	Av. \$0 4186	Av. \$2 1303							
10..... (77,000)	Mixed refuse, principally ashes (no kitchen refuse)...	65,240	.....	1 1716	0 1886	1 3602	\$76,434 90	.....	\$12,305 06	.....	.....	.....	Dumped at sea.
	Store refuse, principally paper.....	5,268	.....	2 7831	2 1738	4 9569	14,661 59	.....	11,451 36	.....	.....	.....	City Refuse Utilization Company.*
	Garbage, principally kitchen wastes.....	11,580	.....	1 5283	1 1247	2 6530	17,697 50	.....	13,024 05	.....	.....	.....	New England Sanitary Product Company.*
			82,088	Av. \$1 3253	Av. \$0 4481	Av. \$1 7734							
507,000	Totals.....	320,047	320,047	Av. \$1 6165	Av. \$0 4109	Av. \$2 0274	\$517,353 08	\$517,353 08	\$131,512 63	\$131,512 63	\$648,865 71	\$ \$1 2798	

* Contract for disposal.

† Proportional total cost per capita for entire year, \$0.7577.

‡ Proportional total cost per capita for entire year, \$0.8084.

§ Proportional total cost per capita for entire year, \$1.3496.

See also table, page 305, and map, page 304, based on these two tables.

Cost of Collection and Disposal of Refuse by Contract in the City of Boston for the Year 1908-09.

Contract Districts and Population.	Character of Refuse.	Tons. (2,000 lbs.)	Total Tons.	Cost per Ton by Districts; Collection and Disposal.	Cost BY DISTRICTS.			Where Disposed of.
					Cost.	Total Cost.	Total Cost per capita.	
2. (56,000)	{ Mixed refuse, principally ashes (no kitchen wastes)	8,010	.....	\$0 9465	\$7,581 84	.....	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	5,806	.....	1 4379	8,348 19	.....	.....	Inland dumps.*
			13,816	Av. \$1 1530		\$15,930 03	\$0 2845	
4. (24,000)	{ Mixed refuse, principally ashes (no kitchen wastes)	4,925	.....	1 1625	\$5,725 08	.....	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	3,125	.....	1 6450	5,140 64	.....	.....	Inland dumps.*
			8,050	Av. \$1 3498		10,865 72	4527	
5. (part) (20,000)	{ Mixed refuse, principally ashes (no kitchen wastes)	8,018	.....	0 7982	\$6,400 00	.....	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	2,230	.....	1 5222	3,394 51	.....	.....	{ New England Sanitary Product Company.
			10,248	Av. \$0 9558		9,794 51	4897	
6. (103,000)	{ Mixed refuse, principally ashes (no kitchen wastes)	40,697	.....	0 7788	\$31,696 17	.....	.....	Inland dumps.
	{ Garbage, principally kitchen wastes	10,909	.....	2 2095	24,102 80	.....	.....	{ New England Sanitary Product Company.
			51,606	Av. \$1 0812		55,798 97	5417	
203,000	Totals	83,720	83,720	Av. \$1 1036	\$92,389 23	\$92,389 23	\$0 4551	

*Removed beyond city limits and presumably fed to swine.
See also table, facing this page, and map, page 304, based on these two tables.

Amount Expended for the Collection and Disposition of House Dirt, Ashes, Waste and Rubbish and House Offal, by Districts, Including Labor, Stock, Etc.

DISTRICTS.	Popu- lation.	WASTE AND RUBBISH.		ASHES.		OFFAL.		Total Cost.	Total Cost per Capita.
		Cost.	Cost per Capita.	Cost.	Cost per Capita.	Cost.	Cost per Capita.		
1. South Boston.....	72,000	\$508 50	\$0 0071	\$31,939 97	\$0 4436	\$14,674 74	\$0 2038	\$47,123 21	\$0 6545
2. East Boston.....	56,000	.....	.....	22,606 44	4037	7,920 04	1414	30,526 48	5451
3. Charlestown.....	40,000	.....	.....	27,946 53	6987	11,377 33	2844	39,323 86	9831
4. Brighton.....	24,000	.....	.....	13,334 83	5556	4,712 49	1964	18,047 32	7520
5. West Roxbury.....	39,000	.....	.....	22,336 69	5727	9,975 47	2558	32,312 16	8285
6. Dorchester.....	103,000	.....	.....	30,724 18	2983	24,627 72	2391	55,351 90	5374
7. Roxbury.....	116,000	1,511 10	0130	70,666 56	6092	32,591 72	2809	104,769 38	9031
8-9. South End and Back Bay.	103,000	22,134 50	2149	109,535 92	1 0634	45,267 55	4395	176,937 97	1 7178
10. North and West Ends....	77,000	14,283 63	1855	76,456 94	9930	17,130 56	2225	107,871 13	1 4010
11. Dumping boats.....	.....	26,328 28	.....	23,940 13	.....	59,154 29	.....	109,422 70	.....
Totals.....	630,000	\$64,766 01	.....	\$429,488 19	.....	\$227,431 91	.....	\$721,686 11	\$1 1455

Comparative Table Showing the Cost of Collecting Ashes, Offal, Waste and Rubbish and Delivering the same at Various Dumps.

Cost per ton (2,000 lbs.), including administrative expenses	\$1 85
Cost per ton, labor on ashes; hired teams and contractor, ...	1 41
Cost per ton, labor on offal; hired teams and contractor, ...	2 98
Cost per ton, labor on waste and rubbish	5 02
Cost per load, transportation to sea	22
Cost per dumping boat load to transport to sea	74 05

The total cost is divided by the total number of tons.

Final Disposition of all Material Collected by the Sanitary Division from February 1, 1908, to January 31, 1909.

MATERIAL.	Deposited on Low Lands.	Towed to Sea.	Plant of the New England Sanitary Product Company.	Plant of the City Refuse Utilization Company.	Collected by Contractors and Disposed of by them.	Total Number of Loads of Material Disposed of.
House dirt and ashes	177,737	94,922	.....	.....	67,254	339,913
Waste and rubbish	2,062	*3,969	.....	14,176	.....	20,207
House offal . . . . .	.....	.....	53,963	.....	8,929	62,892
Cesspool dirt . . . . .	.....	3,970	.....	.....	.....	3,970
Street sweepings . . . . .	.....	37,159	.....	.....	.....	37,159
Totals	179,799	140,020	53,963	14,176	76,183	464,141

* The above includes 3,969 loads of barrel refuse delivered at dumping boats.

MAINTENANCE OF FORT HILL WHARF AND DUMPING BOATS.

For towing by division towboat	\$8,190 14	
For towing by hired towboats	1,362 50	
		\$9,552 64
For repairs on wharves and boats	\$5,843 50	
For dumping boat stock and supplies, ...	2,661 76	
For labor, crew and dumpers	12,134 13	
For allowed time, holidays, etc.	465 82	
		21,105 21
Total cost for maintenance of Fort Hill Wharf and dumping boats		<u>\$30,657 85</u>
Number of trips to sea by division towboat	380	
Number of trips to sea by hired towboats	33	
		413
Number of scows to sea		414
Cost per cart load		\$0.22
Cost per boat load		\$74.05

Contracts.

OBJECT.	Name.	Price per Month.	Commence.	End.
Removal of house dirt and ashes:				
East Boston *	Charles Berman.....	\$1,041 66 ² / ₃	July 1, 1908	July 1, 1910
Brighton *	John H. Carter.....	601 66 ² / ₃	July 15, 1908	July 15, 1910
Part of West Roxbury.	John J. Moore.....	458 33 ¹ / ₃	April 10, 1907	April 10, 1909
North Dorchester.....	Dennis Flynn.....	1,454 16 ² / ₃	Sept. 1, 1907	Sept. 1, 1908
North Dorchester.....	Arthur C. Mullen.....	1,275 00	Sept. 1, 1908	Sept. 1, 1910
South Dorchester.....	John D. Lyons.....	775 00	Aug. 1, 1907	Aug. 1, 1908
South Dorchester.....	Martin F. Gaddis.....	745 83 ¹ / ₃	Aug. 1, 1908	Aug. 1, 1910
Removal of house offal:				
East Boston.....	Thomas Mulligan.....	700 00	April 1, 1906	July 15, 1908
East Boston.....	John T. Lane.....	416 66 ² / ₃	July 15, 1908	July 15, 1910
Brighton.....	John Newbury.....	216 66 ² / ₃	June 20, 1908	June 20, 1910
Part of West Roxbury.	William H. Kennelly.....	207 50	June 15, 1908	June 15, 1910
Dorchester.....	Timothy F. Bradley.....	1,666 66 ² / ₃	April 11, 1907	April 11, 1909
Lease of wharf, Atlantic avenue †.....	Middlesex Trust.....	958 33 ¹ / ₃	March 1, 1903	Dec. 1, 1908
Disposal of house offal.....	New England Sanitary Product Com- pany.....	4,366 66 ² / ₃	Nov. 7, 1901	Jan. 1, 1912
Disposal of waste and rubbish †.....	City Refuse Utilization Company....	458 33 ¹ / ₃	Dec. 1, 1898	Dec. 1, 1908
Removal of dead animals.....	N. Ward Company.....	No charge	Nov. 9, 1901	Jan. 1, 1912

* Collected by city teams before July.
† Running at will since December 1, 1908, at same rate.
All contracts advertised and let to lowest bidder.

Amounts Paid to Contractors.— Year of 1908.

DISTRICTS.	ASHES.		DISTRICTS.	OFFAL.	
	Name.	Per Year.		Name.	Per Year.
2. East Boston.....	Charles Berman.....	\$6,250 04	2. East Boston.....	Thomas Mulligan.....	\$4,526 66
4. Brighton.....	John H. Carter.....	3,329 19	2. East Boston.....	John T. Lane.....	2,053 30
5. Part West Roxbury, .	John J. Moore.....	5,500 00	4. Brighton.....	John Newbury.....	2,600 00
6. North Dorchester.....	Dennis Flynn *.....	13,087 44	5. Part West Roxbury, .	W. H. Kennelly.....	2,494 51
6. North Dorchester.....	Arthur C. Mullen.....	5,100 00	6. Dorchester.....	Timothy F. Bradley*.....	21,666 66
6. South Dorchester.....	John D. Lyons.....	5,425 00	Disposition.....	New England Sanitary	
6. South Dorchester.....	Martin F. Gaddis.....	3,729 15		Product Company *....	56,767 00
Disposition.....	City Refuse Utilization Com- pany.....	5,500 00			

* Dennis Flynn.....\$1,454 16

Timothy F. Bradley.....1,666 66

New England Sanitary Product Company... 4,367 00

Bills left over from year 1907.

CONSTRUCTION AND REPAIR SHOPS.

For work done and material furnished for other divisions the different shops received as follows:

Wheelwright shop	\$2,645 68	
Blacksmith shop, South End	4,696 87	
Blacksmith shop, West End	578 73	
Paint shop	2,250 80	
Harness shop	1,918 51	
• Horseshoeing shop, South End	2,153 25	
Horseshoeing shop, West End	2,008 25	
		\$16,252 09

For work done and material furnished for the Sanitary Division the following amounts were expended by the different shops:

Wheelwright shop	\$6,688 93	
Blacksmith shop, South End	7,426 75	
Blacksmith shop, West End	1,315 00	
Paint shop	3,759 11	
Harness shop	5,303 69	
Horseshoeing shop, South End	2,200 91	
Horseshoeing shop, West End	1,314 72	
		28,009 11

Total amount paid out, stock and labor, all divisions	\$44,261 20
---	-------------

Foreman in charge	\$1,357 84	
Allowed time, holidays	2,734 69	
Allowed time, medical attendance	3 00	
Expended for electric power, printing and incidentals	531 85	
		4,627 38

Total of maintenance of shops	\$48,888 58
Income from other divisions	16,252 09

Net cost to Sanitary Division	<u>\$32,636 49</u>
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DETAILED ACCOUNT OF AMOUNTS PAID TO THE SANITARY DIVISION DURING THE YEAR ENDING JANUARY 31, 1909.

For repair and construction work	\$12,090 59
For horseshoeing	4,161 50
For use of dumping boats	10,441 75
<i>Carried forward</i>	\$16,593 84

<i>Brought forward</i>	\$16,593 84
For hay, straw and grain, board and care of horses,	5,726 78
For feeders, stablemen and watchmen	1,231 60
For fuel, light, etc.	696 58
For board and care of sick horses at veterinary hospital	881 00
For rent of wharf, Atlantic avenue	5,200 00
For labor, removing snow for Street Cleaning and Watering Division	200 25
For horse loaned to County of Suffolk	143 00
For furnishings for prison vans	115 83
	\$40,888 88

Horseshoeing by Divisions.

KINDS AND STYLES.	Sanitary Division.	Street Cleaning and Watering Division.	Sewer Division.	Paving Division.	Lamp Division.	Supply Department.	County of Suffolk.	Total.
Plain shoes.....	6,968	3,748	890	172	68	14	103	11,963
Bar shoes.....	121	144	142	.....	.....	.....	45	452
Leathers.....	4,064	2,647	406	10	28	8	73	7,236
Resets.....	1,121	515	109	12	6	.....	38	1,801
Pads.....	211	152	74	114	2	.....	12	565
Springs.....	3	12	4	.....	.....	.....	.....	19

Average cost per shoe, 41 cents.

Cost of Horseshoeing.

	Division Shops.	Outside Shops.*
Stock.....	\$2,740 07	\$4,086 38
Labor.....	4,937 06	.....
Totals.....	\$7,677 13	\$4,086 38

* Average charge per shoe, 50 cents.

HAY AND GRAIN.

Amount of hay, grain, straw, oats, shorts and corn used by the Sanitary Division for the year of 1908:

Hay	2,454,223	pounds.
Straw	173,085	pounds.
Cob corn	26,480	pounds.
Oats	53,904	bushels.
Shorts	30 $\frac{1}{4}$	tons.
Highest price paid for hay	\$23 00	per ton.
Lowest price paid for hay	15 00	per ton.
Highest price paid for straw	20 00	per ton.
Lowest price paid for straw	15 00	per ton.
Highest price paid for oats	65	per bushel.
Lowest price paid for oats	56 $\frac{1}{2}$	per bushel.
Highest price paid for shorts	31 00	per ton.
Lowest price paid for shorts	27 00	per ton.
Highest price paid for cob corn	1 64	per 100.
Lowest price paid for cob corn	1 35	per 100.

Repairs and Insurance, Year Ending January 31, 1909.

OBJECT.	Contractor.	Amount Paid.	Date of Contract.
Repairs to dumper No. 4.	Benjamin Rose.	\$960 00	June 9, 1908.
Repairs to dumper No. 3.	D. D. Kelly & Son.	765 00	July 17, 1908.
Repairs to dumper No. 2.	D. D. Kelly & Son.	515 00	Sept. 3, 1908.
Dredging wharf, Atlantic avenue.	Bay State Dredging Company (15 hours at \$20).	300 00	Dec. 29, 1908.
Insurance on automobile.	G. R. Griffin & Co.	88 00	Jan. 29, 1909.

Number of Carts, Wagons and Sleds used by the Sanitary Division for the Collection of House Dirt and Ashes, Waste and Rubbish and Offal During the Year Ending January 31, 1909.

DISTRICTS.	ASH CARTS.		OFFAL.				PAPER.		Sleds.	Name of Contractor.
	ALL WOOD.		IRON.		WOOD.		Carts.	Wagons.		
	Single.	Double.	Single.	Double.	Single.	Double.				
1. South Boston.....	17				8		1	1	12	Charles Berman.* John T. Lane.* John H. Carter.* John Newbury. John J. Moore.* William H. Kennelly. Arthur C. Mullen. Martin F. Gaddis. Timothy F. Bradley.
3. Charlestown.....	11	.....	5	.....	1	.....	1	.....	15	
5 and 7. Roxbury.....	46	5	10	.....	14	1	3	2	41	
8. South End shop.....	6	1	.....	1	4	.....	.....	.....	5	
8 and 9. South End and Back Bay.....	73	1	23	2	15	.....	19	10	39	
10. North and West Ends.....	44	.....	9	1	.....	.....	9	7	5	
Total number used by Sanitary Division.....	197	7	47	4	42	1	33	20	117	
IN USE BY CONTRACTORS.										
2. East Boston.....	.....	4	.....	.....	.....	.....	.....	.....	.....	
2. East Boston.....	.....	.....	.....	.....	.....	4	.....	.....	.....	
4. Brighton.....	.....	3	.....	.....	.....	.....	.....	.....	.....	
4. Brighton.....	.....	.....	.....	.....	2	5	.....	.....	1	
5. West Roxbury.....	1	2	.....	.....	.....	.....	.....	.....	.....	
5. West Roxbury.....	.....	.....	.....	.....	.....	3	.....	.....	3	
6. North Dorchester.....	3	8	.....	.....	.....	.....	.....	.....	.....	
6. South Dorchester.....	1	6	.....	.....	.....	.....	.....	.....	.....	
6. Dorchester.....	.....	.....	.....	6	2	3	.....	.....	7	
Totals of all carts, sleds and wagons used.....	202	30	47	10	46	16	33	20	128	

* Contractors furnished their own teams.

LANDS AND BUILDINGS IN CHARGE OF THE SANITARY
DIVISION.

South Boston Stable. (Leased.)

Stables and sheds, with accommodations for nineteen horses, located at 317 and 319 First street, South Boston.

East Boston Stable. (Leased.)

Stables and shed, with accommodations for fifteen horses, located at 324 East Eagle street and occupied jointly by Paving, Sewer, Street Cleaning and Sanitary Divisions.

Charlestown Stable.

With accommodations for twenty-five horses, situated on Rutherford avenue; lot contains 17,300 square feet of land; stable built in 1875, cost \$5,083.07; sheds and outbuildings built in 1879.

Brighton.

Accommodation was provided by the Sewer Division at its stable on Western avenue for two horses of the Sanitary Division. Discontinued July 15, 1908.

Highland Stable.

With accommodations for seventy-two horses on the old almshouse lot, Highland street, containing 81,082 square feet. A part of this stable and adjoining lot is used by the Paving Division. There is on this lot a brick stable, built in 1878, which cost \$88,594.13. On this lot is an offal shed, erected in 1875 at a cost of \$1,160.12. This offal shed was abandoned on April 1, 1897, and in 1900 part of it was remodeled and is now used as a carriage house and wash room.

South City Stables, Shops and Sheds.

Situated on Albany street, opposite Newton street. The lot belonged to the city before being used for this purpose, and contains 90,780 square feet of land.

The stables and buildings connected therewith are of brick. There are also on the premises five wooden sheds, used for storing wagons, etc. The stable is two stories high, with

French roof, and has accommodations for 100 horses. Twenty-three horses are kept in sheds. Total original cost, exclusive of land, \$79,089.23. In 1899 a veterinary hospital was built and equipped for the purpose of caring for sick and disabled horses.

Connected with stables are blacksmith, wheelwright, paint and harnessmaker's shops, in which wagons, carts, harnesses, etc., used by this and other departments are constructed and kept in repair, also a horseshoeing shop for shoeing the horses of the division located in this section of the city.

West Stables and Sheds.

The stable is a brick building, a story and a half high, 128 feet by 50 feet, located on North Grove street; built in 1860 without buildings attached to same. It has accommodations for ninety horses in stables and sheds. The lot contains about 45,152 square feet. On May 11, 1896, a horseshoeing shop was established for the purpose of shoeing horses of the division stabled in this section of the city.

Fort Hill Wharf.

Containing 21,054 square feet, placed in charge of the Sanitary Division; used as a dumping station for the city's garbage and refuse and as a mooring place for dumping boats and scows, which convey this material to sea and to the plant of the New England Sanitary Product Company. Cost of constructing platform and dredging dock, \$6,219.33. There are five Barney dumping boats which are in continual use and are towed to sea by the tugboat "Cormorant."

A portion of this wharf is used by the Street Cleaning Division as a locker for patrol push-carts, etc., and a part is in use by the Paving Division.

Litchfield's Wharf. (Leased.)

Situated at 466 to 470 Atlantic avenue, containing about 35,460 square feet. Leased from Jacob H. Hecht March 1, 1898, for a period of ten years. This wharf adjoins Fort Hill Wharf and is occupied in part by the New England Sanitary Product Company as a berth for their scows, and also by the buildings of the City Refuse Utilization Company for the disposal of waste and rubbish. This property is now owned by the Middlesex Trust. Lease extended from March 1, 1908, to December 1, 1908, and now running at will.

Weighing Shed. (Hired.)

Situated at the corner of Massachusetts avenue and South-ampton street. Rented from the Boston Consolidated Gas Company. Lot contains about 2,300 square feet of land.

Wharf Property on Freeport Street, Dorchester.

On Freeport street, Dorchester, wharf property containing 160,745 square feet, bought by the city for the Sanitary Division but never used.

APPENDIX F.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE SEWER DIVISION.

BOSTON, MASS., February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

Dear Sir,—I submit herewith report of the Sewer Division for the year ending January 31, 1909.

Yours respectfully,

C. R. CUTTER,

Acting Deputy Superintendent.

The work of the division is carried on under chapter 3, City Ordinances, 1908, and chapter 47, Revised Ordinances, 1898, and the following statutes:

Chapter 426—1897, as amended by 450—1899 and 268—1903.

Chapter 383—1903, as amended by 464—1907.

Chapter 485—1907.

Chapter 550—1907.

Chapter 204—1908.

Chapter 514—1908.

THE DUTIES OF THE SEWER DIVISION.

Charge of the entire sewerage system of the city.

The care and maintenance of the pumping station, reservoirs, etc.

The designing and building of all sewers and surface drains and catch-basins and the maintenance of same after construction.

The collection of all entrance fees against such estates as have not paid any sewer assessment.

Making all plans for the assessments of betterment on account of sewer construction, as determined by the Street Commissioners.

The granting of permits to licensed drain layers to connect with common sewers and the inspection, plotting and recording of all such connections.

Total number of employees on pay roll February 1, 1908	857
Total number of employees on pay roll February 1, 1909	608
Total amount of weekly pay roll February 1, 1908,	\$12,608.11
Total amount of weekly pay roll February 1, 1909,	\$10,173.50
Total amount of monthly pay roll February 1, 1908	\$1,123.32
Total amount of monthly pay roll February 1, 1909	\$617.00
Average weekly pay roll, including monthly roll, for fiscal year amounted to	\$12,107.54
Charged as follows:	
* Maintenance	\$4,409 53
Sewerage works	3,093 20
Separate systems of drainage	4,604 81
	\$12,107 54
Average number of men employed	730
Average number of horses maintained by the division during the year	60
The rate of wages per day paid to common laborers	\$2.25

* Includes sums charged to	{	Sanitary Division . .	\$9,174.15
		Other divisions . .	1,097.93

Financial Statement from February 1, 1908, to January 31, 1909.

OBJECT.	Balances on Hand Feb. 1, 1908.	Appropriations, Loans and Transfers.	Revenue Received During the Year.	Total Credits.	Expenditures During the Year.	Balances on Hand Jan. 31, 1909.
Sewer Division .....	.....	\$350,000 00	\$2,142 14	\$352,142 14	\$351,162 41	* \$979 73
Sewerage Works	\$73,778 09	300,000 00	.....	373,778 09	322,482 32	51,295 77
Separate Systems of Drainage	176,597 47	655,000 00	.....	831,597 47	599,973 76	231,623 71
Totals	\$250,375 56	\$1,305,000 00	\$2,142 14	\$1,557,517 70	\$1,273,618 49	* \$282,919 48

* Balance transferred to Ferry Division, \$979.73.

MAINTENANCE EXPENDITURES, FEBRUARY 1, 1908, TO
JANUARY 31, 1909.

SEWER DIVISION.

Improved Sewerage.

Pumping station, inside	\$58,548 65	
Pumping station, outside	12,447 85	
Pumping station, engines	27,328 05	
Pumping station, boilers	16,205 83	
		\$114,530 38
Moon Island		12,236 72
Main and intercepting sewers		15,872 67
Towboat	\$16,570 58	
Less amount paid by Sanitary Division	8,190 14	
		8,380 44
Office salaries		3,000 00
		\$154,020 21

Stony Brook.

Maintenance		* 5,685 88
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Miscellaneous Maintenance Charges.

Cleaning catch-basins		52,771 59
Yard and lockers		7,907 78
Employed at yards		20,809 33
Horses, carts, harnesses, etc.	\$32,832 34	
Less amount earned by division teams	15,578 21	
		17,254 13
Automobiles		4,296 45
Garage, West Roxbury		1,548 90
Cleaning sewers		31,776 86
Office salaries		16,643 83
Office expenses		3,802 39
		\$316,517 35

Culverts, repairing and maintaining	\$923 99	
Repairing department buildings	1,111 23	
Repairing catch-basins, South Boston	926 47	
Repairing catch-basins, East Boston	174 74	
Repairing catch-basins, Charlestown	1,355 75	
Repairing catch-basins, Brighton	693 24	
Repairing catch-basins, West Roxbury	156 73	
Repairing catch-basins, Dorchester	2,296 02	
Repairing catch-basins, Roxbury	2,284 71	
Repairing catch-basins, City Proper	1,269 06	
Repairing sewers, East Boston	1,022 74	
Repairing sewers, South Boston	696 15	
Repairing sewers, Charlestown	410 59	
Repairing sewers, Brighton	1,248 01	
Repairing sewers, West Roxbury	823 93	
Repairing sewers, Dorchester	1,735 28	
Repairing sewers, Roxbury	1,610 85	
Repairing sewers, City Proper	1,419 96	
Repairing streets	269 88	
		20,429 33
Fuel and oil		1,310 42

<i>Carried forward</i>		\$338,257 10
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* Includes cleaning Stony brook, \$1,528.85.

<i>Brought forward</i>	\$338,257 10
Hardware, tools, etc.	1,930 75
Sundries	381 16
Damages, claims and medical attendance	2,851 70
Telephones not included elsewhere	1,717 99
Examining and locating	504 38
House connections	5,807 17
Rubber goods	457 50
Gatehouse, Fenway	163 91
Corporation inspection	741 00

Miscellaneous Charges.

Boston Consolidated Gas Company	985 04
Transit Commission	223 40
Water Department	58 23
Boston Elevated Railway Company	207 11
Edison Electric Illuminating Company	1,201 67
Sanitary Division	110 35
Finance Commission	233 34
Boston & Maine Railroad	136 22
Old Colony Street Railway	73 36
City Hospital	38 89
Boylston Market Association	6 48
Suffolk County Courthouse	9 18
Schoolhouse Commission	18 10
Consumptives' Hospital	151 97

\$356,266 00
Credit.

Decrease of stock in yards	\$1,736 75
Amount earned by division engines	2,670 32
Northern avenue and Sleeper street, paid by Engineering Department	696 52
	5,103 59
	<u>\$351,162 41</u>

*Amount Collected by City Collector and Credited to Appropriation for Sewer
Division Maintenance, February 1, 1908, to January 31, 1909.*

New York, New Haven & Hartford Railroad	\$1 87
Old Colony Street Railway Company	78 11
Boston Consolidated Gas Company	754 25
Edison Electric Illuminating Company	471 42
Boston Elevated Railway Company	327 92
Transit Commission	174 67
Coughlan & Sheils Company	14 00
Boston & Maine Railroad	136 22
Schoolhouse Department	18 10
City Hospital	38 89
Courthouse	10 82
Consumptives' Hospital	115 87
	\$2,142 14

Appropriation for 1908-1909	\$350,000 00
Collections for 1908-1909	2,142 14

\$352 142 14

Transfer by auditor to Ferry Division	979 73
---------------------------------------	--------

\$351,162 41

SEWERAGE WORKS.

February 1, 1908, to January 31, 1909.

Office salaries	\$8,322 61	
Engineers' salaries	53,750 10	
Engineers' expenses	4,681 35	
Engineers' salaries and expense, Stony brook improvement	2,291 52	
Miscellaneous, Stony brook	191 42	
Land takings	16,432 35	
Manholes, construction	1,995 93	
Automatic gage, Hereford street	505 94	
Sundries	1,061 75	
Tickets	400 00	
Stock	630 92	
		\$90,263 89

IMPROVED SEWERAGE — CONSTRUCTION.

Pumping station	\$28,951 00	
Main and intercepting sewers	2,803 93	
Moon Island	778 32	
		32,533 25

SEWERAGE WORKS — SEWER CONSTRUCTION.

South Boston. (Day Labor.)

A street, West First street to Mt. Washington avenue	\$25,984 83	
West First street, Dorchester avenue to A street	31,016 34	
		\$57,001 17

Contract.

Gold street, existing sewer to E street	\$452 23	
Washburn street, Dorchester avenue to Boston street	2,273 30	
		2,725 53
		59,726 70

East Boston. (Day Labor.)

Bennington street, Walley and Gladstone streets, connections, Bennington street, Leverett street to Revere line	\$2,091 20	
Condor street, Putnam street to Brooks street	136 27	
Cottage street, outlet	570 30	
East Boston low level sewer, private land and streets, Austin avenue to Bennington street	1,064 40	
Glendon street, Condor street to East Eagle street	15,464 09	
Glendon and Putnam streets, interceptor, Section 2	1,213 99	
Putnam street, Condor street to White street	20,398 85	
	2,347 81	
		43,286 91
Carried forward	\$43,286 91	\$182,523 84

Brought forward \$43,286 91 \$182,523 84

Contract.

Ashley street, Bennington street to Breed street	\$1,618 11	
Border street, Central square to 170 feet north	268 39	
Border street, Eutaw street to 160 feet southeast	145 98	
Breed street, Leyden street to Gladstone street	73 88	
Cleveland street, Prescott street to 200 feet east	359 83	
Walley street, Leyden street to Orient avenue	962 15	
		3,428 34
		46,715 25

Charlestown. (Contract.)

Charles street place, off Charles street to end of place	412 79
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Brighton. (Contract.)

Western avenue, Rena street to North Harvard street	951 84
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West Roxbury. (Day Labor.)

Canterbury street, at Calder street, culvert	\$1,664 32
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Contract.

Canterbury street, Talbot avenue high level sewer to Paine street, ...	\$1,807 77	
Canterbury street, Calder street to Angell street	159 47	
Canterbury street, Angell street to 140 feet west	41 30	
Centre street, Spring street to 100 feet northeast of Cottage avenue	470 79	
Hawthorne street, Sycamore street to Heathcote street	1,792 34	
Heathcote street, Hawthorne street to Poplar street	283 61	
Kittredge street, Mayo street to 175 feet southwest	588 93	
Mendum street, Walter street to 340 feet southeast	71 58	
Neponset avenue, 60 feet west of Stony brook to 160 feet east	188 98	
Poplar street outlet, Section 1	1,583 83	
Poplar street outlet, Section 2	3,594 17	
Poplar street outlet, Section 3	39 44	
Wachusett street, Weld Hill street to 630 feet southwest	2,094 87	
Westover street, Dunbar street to existing sewer	587 83	
		13,304 91
		14,969 23
<i>Carried forward</i>		\$245,572 95

Brought forward \$245,572 95

Dorchester. (Day Labor.)

Dakota street, Greenbrier street to Geneva avenue	\$1,193 73	
Oakland brook, Rockdale street to railroad	71 62	
Oakland brook, private land, Edgewater drive to River street	32 56	
Freeport street brook, private land, from Bowdoin street to 265 feet east	57 46	
Morton street, Lucerne street to Blue Hill avenue	2,373 48	
		\$3,728 85

Contract.

Bellevue street, Hamilton street to Kane street	\$1,107 15	
Bowdoin street, Draper street to Hamilton street	270 74	
Codman street, Dorchester ave- nue to Washington street	1,284 75	
Elmo street, existing sewer to Erie street	232 58	
Favre street, Oakland street to 350 feet northeast	2,399 10	
Hamilton street, existing sewer to Mt. Everett street	1,120 87	
Harvard street, Hansborough street to Randolph avenue	506 18	
Howard avenue, Cunningham street to Dalkeith street	400 19	
Malta street, River street to Edgewater drive	1,501 96	
North Munroe terrace, Neponset avenue to Train street	1,090 00	
Payson avenue, Glendale street to 335 feet north	2,184 91	
Randolph road, Rosewood street to Hollingsworth street	1,000 93	
South Munroe terrace, Neponset avenue to Train street	1,132 60	
Randolph road, Rosewood street to River street	224 51	
Tokio street, River street to Edgewater drive	1,169 47	
Train street, King street to South Munroe terrace	944 07	
Wayland street, Hartford street to 170 feet northwest	549 57	
Whitney park, existing sewer to 80 feet northeast	337 05	
		17,456 63
		21,185 48

Roxbury. (Day Labor.)

Hoffman street, overflow in pri- vate land over Stony brook, southeast of Lamartine street,	\$378 69	
<i>Carried forward</i>	\$378 69	\$266,758 43

<i>Brought forward</i>	\$378 69	\$266,758 43
Phillips street, Ward street to Longwood avenue	1,309 27	
		\$1,687 96

Contract.

Ellis street, Fulda street to Hawthorne street	\$549 11	
Larkin street, Hampden street to Adams street	178 04	
Seaver street, Harold street to Parkview street	2,631 23	
Sherwood street, from Norfolk avenue to end of street	662 62	
		4,021 00
		5,708 96

City Proper. (Day Labor.)

Beacon street, Spruce street to Hancock avenue	\$2,298 48	
Brighton street, Chambers street to Leverett street	994 98	
Central street, India street to Broad street	10,736 98	
Franklin and Broad streets	16,555 42	
Morton street, Endicott street to Salem street	714 61	
Myrtle street, Revere street to 100 feet south	382 82	
Oak street, Harrison avenue to May place	1,837 26	
Prince street and North End Playground	1,063 18	
		\$34,583 73

Contract.

Broad street, Custom House street to India square (paving)	\$760 16	
Congress street, Franklin street to Milk street (paving)	945 00	
Cooper street, Washington Street North to Endicott street	97 58	
		1,802 74
		36,386 47

STONY BROOK CONDUIT.

Contract.

Section 2	\$781 29	
Section 4	601 55	
		1,382 84

NEW CATCH-BASINS.

South Boston	\$491 24	
East Boston	946 64	
Charlestown	120 83	
Brighton	862 23	
West Roxbury	1,460 18	
Dorchester	3,412 84	
Roxbury	4,729 27	
City Proper	222 39	
		12,245 62

Total \$322,482 32

SEPARATE SYSTEMS OF DRAINAGE, FEBRUARY 1, 1908, TO
JANUARY 31, 1909.

Engineers' salaries	*\$23,064 60
Engineers' expenses	936 07
Sundries	2,990 69

OLD STONY BROOK CHANNELS, BETWEEN BACK BAY
FENS AND ELMWOOD STREET.

Day Labor.

Back Bay Fens to Bryant street, at Hemenway street, Section No. 1	\$31,822 85	
Across Huntington avenue	19,480 18	
Rogers avenue, between Hunt- ington avenue and Ruggles street (test-pits)	548 39	
Downing street, Old Whittier street to Vernon street	4,752 85	
Vernon street to Linden Park street	31,002 96	
Linden Park street to Elmwood street	23,280 86	
		\$110,888 09

Contract.

Bryant street, Section 2	\$26,521 32	
Huntington avenue at Bryant street connection	2,953 73	
Rogers avenue, Section 3 and part of Section 4	57,983 39	
Part of Section 4	17,444 55	
Section 5	52,611 82	
		157,514 81
		268,402 90

STONY BROOK.

Day Labor.

Canterbury branch, 630 feet south of Neponset avenue to Harvard street	\$23,963 56
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ROSLINDALE BRANCH.

• Railroad and Corey streets	\$7,938 70	
Bellevue avenue to Belgrade avenue and extension to rail- road	44,878 35	
Private land and Fresno street, One hundred and fifty feet northeast of Ashland street to Poplar street	2,802 53	
	16,044 42	
		71,664 00

Contract.

Stony brook conduit in Meehan street and private land Williams street to 150 feet south of Lotus place	55,681 20	
		151,308 76
<i>Carried forward</i>		\$446,703 02

<i>Brought forward</i>		\$446,703 02
Avenue Louis Pasteur, day labor		2,166 02
Shepard brook, day labor		39,868 21
Talbot avenue high level sewer, between Lyons street pumping station and Talbot avenue	\$47,695 56	
Between Helen and Bernard streets	15,539 00	
		63,234 56

EAST BOSTON.

Day Labor.

East Boston low level sewer		3,717 74
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CHARLESTOWN.

Day Labor.

Miller and Lawrence streets		524 70
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BRIGHTON.

Contract.

Corey road (balance contract 1905)	\$69 05	
Commonwealth terrace, from Allston street to 300 feet west	1,370 61	
Market street, Spring street to Wicklow street,	1,015 10	
		2,454 76

WEST ROXBURY.

Day Labor.

Cotton street, Walter street to Fairview street	\$2,295 37	
South street, Guernsey street to Centre street	1,288 30	
		\$3,583 67

Contract.

Arden street, Belgrade avenue to Colberg avenue	\$498 45	
Hewlett street brook, in private land between Robert street and Roslindale Playground	1,003 84	
Mendum street, between Walter and Fairview streets and out- let	3,829 11	
Neponset avenue brook, Mt. Hope street	292 50	
Perkins street, Canterbury street to Grew avenue	789 15	
Poplar street, Metropolitan ave- nue, etc.	12,541 36	
Richards avenue, Hyde Park avenue to Hyde Park line	1,256 56	
Sycamore street, Florence street brook to Hawthorne street	2,264 77	
West street, Orange street to Bellevue avenue	534 22	
Williams street, Meehan street to Stedman street	6,808 35	
		29,818 31
		33,401 98
<i>Carried forward</i>		\$592,070 99

<i>Brought forward</i>		\$592,070 99	
DORCHESTER.			
<i>Day Labor.</i>			
Harlem street, Greenwood street to Glenway street		\$1,964 85	
<i>Contract.</i>			
Adams street, Minot street to Oak avenue	\$45 50		
Corona street, Bowdoin street to Geneva avenue	168 22		
Fremont street, River street to Norfolk street	2,051 64		
Minot street, Adams street to Sheridan street	476 02		
Old road, Glenway street to Elmo street	39 00		
		<u>2,780 38</u>	
			4,745 23
ROXBURY.			
<i>Day Labor.</i>			
Whittier street, 20 feet northwest of Tremont street (test-pit)	\$2 92		
Wyoming street, Wabeno street to Humboldt avenue	774 47		
		<u>\$777 39</u>	
<i>Contract.</i>			
Centre street, Amory street to Oakview terrace		1,890 05	
		<u></u>	2,667 44
CITY PROPER.			
<i>Day Labor.</i>			
Beacon street, Spruce street to Hancock avenue		\$439 91	
<i>Contract.</i>			
Beacon street, Hereford street to Massachusetts avenue		50 19	
		<u></u>	490 10
Total			<u>\$599,973 76</u>

* Total amount of engineers' salaries charged to this appropriation, \$38,739.17.
As follows: General account.....\$23,064 60
To jobs.....15,674 57

	<u>\$38,739 17</u>
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Catch-basins Cleaned by Day Labor, 1908-09.

Districts.	Number Basins.	Cubic Yards Excavated.	Cubic Yards per Basin.	Labor.	Teams.	Excavating and Locating.	Miscellaneous.	Dumping.	Total.	Cost per Basin.	Cost per Cubic Yard.
1. South Boston....	747	1,447	1.94	\$1,671 82	* \$863 50	\$30 00	.....	.....	\$2,565 32	\$3 42	\$1 77
2. East Boston.....	106	289	2.72	805 51	285 20	14 00	\$12 50	.....	1,117 21	10 54	3 87
3. Charlestown.....	562	1,404	2.50	1,877 13	955 50	16 00	18 87	.....	2,867 50	5 10	2 04
4. Brighton.....	147	421	2.86	779 17	339 50	.....	9 54	.....	1,128 21	7 67	2 68
5. West Roxbury....	226	572	2.53	968 67	† 534 50	.....	13 57	.....	1,516 74	6 51	2 57
6. Dorchester.....	584	1,720	2.94	2,062 96	1,410 90	.....	.....	.....	3,473 86	5 95	2 02
7-8. Roxbury and city,	674	1,722	2.56	2,377 55	1,326 72	252 13	25 90	\$58 75	4,041 05	6 00	2 35
9-10. City Proper.....	707	2,181	3.08	2,510 70	† 1,292 25	192 25	30 50	\$ 405 00	4,430 70	6 19	2 00
Totals.....	3,753	9,756	2.60	\$13,053 51	\$7,008 07	\$504 38	\$110 88	\$463 75	\$21,140 59	\$5 63	\$2 17

* \$7.50 paid 1909.

† \$45.00 paid 1909.

‡ \$41.25 paid 1909.

§ \$15.00 paid 1909.

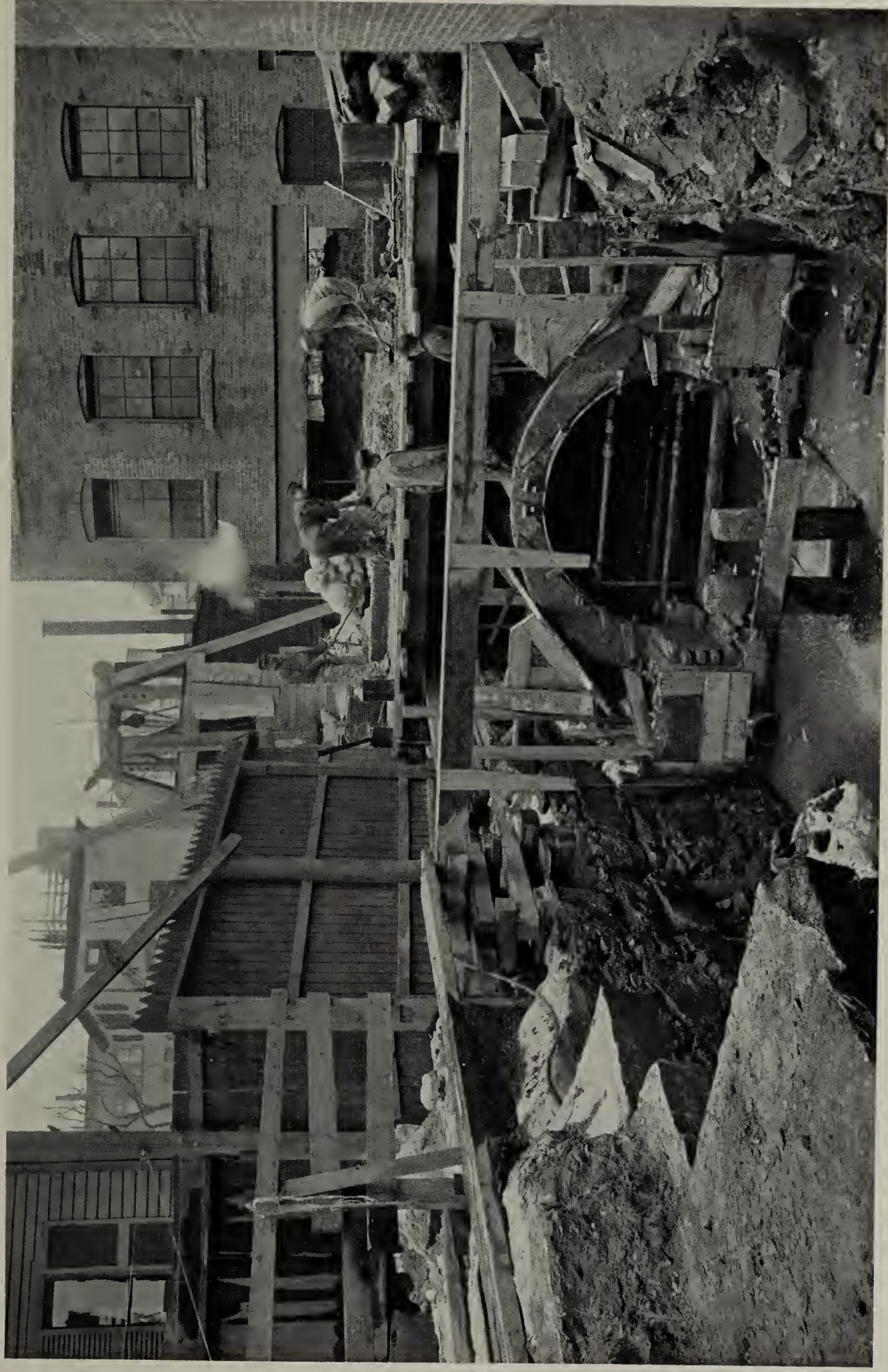
Catch-basins Cleaned by Contract, 1908=09.

DISTRICTS.	Contractor.	Start and Finish of Contract.	Price per Cubic Yard.	Total Cubic Yards Excavated.	Contractor Paid.	Total Basins Cleaned.	Average Cubic Yards per Basin.	Contractor Average per Basin.	Inspection.	Average Cost to City per Basin.	Average Number Basins Cleaned per Day.
1. South Boston..	M. F. Gaddis....	{ July 16, 1908 } { Sept. 28, 1908 }	\$1 49	2,180.00	\$3,248 20	698	3.12	\$4 65	\$230 11	\$4 98	11.1
2. East Boston...	J. H. Ferguson..	{ July 13, 1908 } { Nov. 24, 1908 }	1 68	1,148.90	1,930 19	400	2.87	4 825	No charge.	4 825	3.6
3. Charlestown...	James F. Nyhan.	{ July 21, 1908 } { Sept. 23, 1908 }	1 33	563.80	749 85	200	2.82	3 75	\$168 00	4 59	3.6
4. Brighton.....	Mark H. Lynch.	{ Aug. 4, 1908 } { Sept. 14, 1908 }	1 25	914.80	1,143 51	304	3.01	3 76	148 01	4 25	8.4
5. West Roxbury.	Mark H. Lynch.	{ July 16, 1908 } { Nov. 3, 1908 }	1 25	1,910.30	2,387 88	600	3.18	3 98	418 50	4 68	6.4
6. Dorchester....	James F. Murphy	{ July 10, 1908 } { Nov. 3, 1908 }	1 20	2,552.90	3,063 48	805	3.17	3 81	270 43	4 14	8.1
7-8. Roxbury and City Proper }	M. Doyle & Co..	{ June 19, 1908 } { Jan. 16, 1909 }	1 00	4,842.70	4,842 70*	1,486	3.26	3 26	1,512 63†	4 27	8.4
9-10. City Proper....	Mark H. Lynch.	{ June 15, 1908 } { Dec. 16, 1908 }	1 25	3,161.10	3,951 39	1,007	3.14	3 92	729 91	4 65	6.5

* \$4,460.20 paid in 1908-09.

† \$4.55 paid in 1909.

Total basins cleaned.....	5,500	TOTAL COST: Contractors.....	\$21,317 20
Total excavation.....	17,274.5 cubic yards.	Inspection.....	3,518 89
Average per basin.....	3.14 cubic yards.	Advertising and printing.....	51 89
		Miscellaneous.....	24 00
		Average cost per basin.....	\$24,911 98
		Average cost per cubic yard.....	\$4 53
			\$1 44



8-FOOT BY 6-FOOT STONY BROOK CONDUIT, UNDER THE TOWER MANUFACTURING COMPANY'S BUILDING, ROXBURY.

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URBANA

Sewerage Works.

Expenditures, February 1, 1908, to January 31, 1909.

STREET DEPARTMENT — SEWER DIVISION.

331

ACCOUNTS.	Labor.	Teaming.	Materials.	Contracts.	Miscellaneous.	Total.
Engineers' salaries.....	\$53,750 10					\$53,750 10
Engineers' expense.....	1,520 53	\$138 88	\$155 23		\$2,866 71	4,681 35
Tickets, Boston Elevated Railway Company.....					400 00	400 00
Office salaries.....	8,322 61					8,322 61
Stock.....	630 92					630 92
Pumping station.....	6,238 26			\$21,502 74	1,210 00	28,951 00
Sundries.....					1,061 75	1,061 75
Main and intercepting sewers.....			2,803 93			2,803 93
Moon Island.....	750 82		27 50			778 32
Land takings and court executions.....					16,432 35	16,432 35
New manholes, entire city.....	1,093 66	313 39	588 88			1,995 93
New catch-basins, South Boston.....	116 86	56 75	159 42	158 21		491 24
New catch-basins, East Boston.....	78 20	86 75	215 75	565 94		946 64
New catch-basins, Charlestown.....			47 33	73 50		120 83
New catch-basins, Brighton.....	378 74	110 40	373 09			862 23
New catch-basins, West Roxbury.....	621 18	114 00	513 50	211 50		1,460 18
New catch-basins, Dorchester.....	827 77	247 75	1,292 91	1,044 41		3,412 84
New catch-basins, Roxbury.....	1,333 82	503 57	1,203 14	1,688 74		4,729 27
New catch-basins, City Proper.....	106 57	28 00	87 82			222 39
Automatic gage, Hereford street.....	435 93	10 50	59 51			505 94
Carried forward.....	\$76,205 97	\$1,609 99	\$7,528 01	\$25,245 04	\$21,970 81	\$132,559 82

Sewerage Works.

Expenditures, February 1, 1908, to January 31, 1909.—Concluded.

ACCOUNTS.	Labor.	Teaming.	Materials.	Contracts.	Miscellaneous.	Total.
Carried forward.....	\$76,205 97	\$1,609 99	\$7,528 01	\$25,245 04	\$21,970 81	\$132,559 82
Stony brook:						
Engineers' salaries.....	1,880 32					1,880 32
Engineers' expense.....					411 20	411 20
Miscellaneous.....	8 75				182 67	191 42
Stony brook conduit, Section 2.....				777 67	3 62	781 29
Stony brook conduit, Section 4.....		24 50	19 50	557 55		601 55
Sewers built in entire city.....	85,844 56	11,135 78	55,855 93	33,220 45		186,056 72
Totals.....	\$163,939 60	\$12,770 27	\$63,403 44	\$59,800 71	\$22,568 30	\$322,482 32

Separate Systems of Drainage.

Expenditures, February 1, 1908, to January 31, 1909.

ACCOUNTS.	Labor.	Teaming.	Materials.	Contracts.	Miscellaneous.	Total.
Engineers' salaries.....	\$23,064 60					\$23,064 60
Engineers' expense.....	307 89	\$15 75			\$312 43	936 07
Cleaning Stony brook.....	1,515 43	443 73	\$29 40			1,988 56
Weir, Stony brook.....	387 74	38 50	152 22			578 46
Sundries.....		32 99			390 68	423 67
Sewers built in entire city.....	218,779 19	23,242 91	113,258 98	\$217,701 32		572,982 40
Totals.....	\$244,054 85	\$23,773 88	\$113,440 60	\$217,701 32	\$1,003 11	\$599,973 76

Catch-basins Built, 1908=09.

DISTRICTS.	Contract.	Day Labor.	REBUILT.	
			Contract.	Day Labor.
City Proper.....		2*		
Roxbury.....	7	17	2	2
Dorchester.....		16		
West Roxbury.....	5	11		
Brighton.....		8†		
Charlestown.....				
East Boston.....		1		
South Boston.....		5‡		2§

Total catch-basins built, 78.

* One charged to Boston & Maine Railroad.

† One paid by Paving Division.

‡ Two charged to Edison Company.

§ Charged with West First street sewer.

Land-takings.

M. A. & C. J. Arthur <i>et als</i>	\$10,000 00	Relocation Stony brook, Washington street to Green street, Street Commissioners' award.
E. J. Lane	1,937 94	Foster street, Brighton, court execution.
W. C. Burt.....	372 00	River street, Street Commissioners' award.
N. M. Neil.....	175 00	Freeport street brook, court execution.
A. Brennan.....	150 00	Clifford street, Street Commissioners' award.
R. F. Scannell Company.....	2,559 96	Oakland brook, court execution.
Margaret Brooks.....	107 20	Canterbury branch, Stony brook, Street Commissioners' award.
Town of Brookline.....	750 00	Addington road.
James H. Morton.....	50 00	Neponset avenue, Street Commissioners' award.
L. Karle.....	330 25	Avondale place, Street Commissioners' award.
Total	\$16,432 35	

SEWERAGE WORKS LOAN.

New Catch-basins Paid for, February 1, 1908, to January 31, 1909. (Contract and Day Labor.)

DISTRICT.	Built by	BUILT IN 1907.		BUILT IN 1908.			Total Expendi- ture.	Location.	Number Catch-basins Built.	Number Catch-basins Rebuilt.
		Con- tractor.	Materials, etc.	DAY LABOR COST.						
				Labor.	Material.					
New catch-basins, South Boston	Built in 1907.	\$158 21	\$27 68							
New catch-basins, South Boston	W. F. Lowe.			\$43 84 73 02	\$69 70 118 79			Dorchester avenue. A street.	1 2 3	
New catch-basins, East Boston	Built in 1907.	565 94	255 74			\$116 86 46 76	\$491 24 946 64	* Maverick street.	1	
New catch-basins, Charlestown	Built in 1907.	73 50	47 33				120 83			
New catch-basins, Brighton	A Pitts.			{ 232 98 58 73 87 03	313 40 75 15 94 94			North Beacon street. Montfern avenue. Western avenue.	5 1 1	
New catch-basins, West Roxbury	Built in 1907.	211 50	154 21	\$378 74	\$483 49		862 23		7	
New catch-basins, West Roxbury	John Kelly.			{ 171 18 261 90 130 15	142 35 226 60 104 34			Lamartine street. Brookside avenue. Canterbury street.	2 3 2	
New catch-basins, West Roxbury	William Park.			57 95				* Canterbury street.	1	
				\$621 18	\$473 29		1,460 18		8	

New Manholes Built, February 1, 1908, to January 31, 1909. (Day Labor.)

LOCATION.	Built by	Number.	Teaming.	Cost.		Total.
				Labor.	Material.	
Boylston and Church streets.....	A. Pitts.....	1	\$5 25	\$30 85	\$61 40	\$97 50
Eaton and North Russell streets.....	Thomas Clougherty.....	1	26 25	31 10	28 38	85 73
No. 3 Bishop street, West Roxbury.....	John Kelly.....	1	21 00	74 12	34 72	129 84
Florence street, West Roxbury.....	John Kelly.....	1	17 50	92 25	42 15	151 90
Riverside street, near Tremont street.....	A. Pitts.....	1	33 50	58 87	31 69	124 06
Grosvenor road, at Centre street.....	John Kelly.....	1	7 00	26 65	35 42	69 07
Fxeter street, corner Boylston street.....	F. E. McCarthy.....	1	18 25	63 58	33 55	115 38
Whittier street.....	P. F. Kelley.....	1	16 50	90 07	22 53	129 10
Passageway, near Greenwich park.....	P. F. Kelley.....	1	2 66	18 34	22 07	43 07
Albany street, at Ambulance station.....	P. F. Kelley.....	1	10 50	33 13	35 60	79 23
East Fifth street, between L and M streets.....	W. F. Lowe.....	1	29 75	91 85	37 73	159 33
Orchard street, near Eustis street.....	P. F. Kelley.....	1	21 84	38 83	31 44	92 11
Groton street.....	P. F. Kelley.....	2	7 88	42 90	80 68	131 46
Shawmut avenue.....	P. F. Kelley.....	1	5 88	59 87	24 81	90 56
Leedsville street.....	William Park.....	1	8 75	16 82	16 80	42 37
Lime street.....	F. E. McCarthy.....	* 2	12 00	57 38	.....	69 38
Dudley and Dana streets.....	P. F. Kelley.....	1	59 25	123 55	50 54	233 34
Prescott street, 50 feet north of Lexington street.....	John Conry.....	*1	.....	117 25	.....	117 25
Cabot street.....	P. F. Kelley.....	*1	.....	26 25	.....	26 25
.....	.....	.....	† 9 00	.....	.....	9 00
Totals.....	.....	21	\$312 76	\$1,093 66	\$589 51	\$1,995 93

* Cost not complete.

† Teaming done in 1907.

SEWERAGE WORKS.

SEWERS AND SURFACE DRAINS BUILT BY THE CITY, FEBRUARY 1, 1908, TO JANUARY 31, 1909.

City Proper.

LOCATION.	Built by	Engineer's Preliminary Estimate.	Amount of Contractor's Bid.	Number of Bidders.	Begun.	Finished.	Cost, 1908-09.		Teaming Included in Cost.	Cost Previous to February 1, 1908.	Total Cost.	Dimensions.	Kind.	Average Cut.	Character of Soil.	Loan.
							Labor.	Total.								
Day Labor.																
Oak street, from Harrison avenue to May place.....	P. F. Kelley.....	\$1,829 22			July 22, 1908	Sept. 26, 1908	\$1,030 90	\$1,837 26	\$240 51		\$1,837 26	173.77 ft. 2 ft. by 1 ft. 11 in.	Concrete.	7½ feet.	Clay.	Sewerage works.
Central street, from India street to Broad street.....	F. E. McCarthy.....	6,600 01			July 14, 1908	Nov. 5, 1908	6,290 91	10,736 98	757 15		10,736 98	222.32 ft. 3 ft. 9 in. by 3 ft. 11½ in.	Brick.	15 feet.	Filling and peat.	Sewerage works.
Franklin and Broad streets.....	F. E. McCarthy.....	19,357 07			Mar. 20, 1908	Aug. 27, 1908	9,204 75	16,555 42	1,356 50		16,555 42	706.89 ft. 30 in. by 36 in.	Brick.	14½ feet.	Clay and filling.	Sewerage works.
Beacon street, from Spruce street to Hancock avenue.....	Thomas Clougherty.....				Dec. 6, 1907	Feb. 17, 1908	668 95	2,298 48	400 25	\$3,058 41	*5,796 80	7.24 ft. 12 in. 23.31 ft. 15 in.	Pipe.	14 feet. 3½ feet.	Clay and gravel.	Sewerage works. Separate systems of drainage.
Brighton street, from Chambers street to Leverett street.....	J. F. Owen.....				Nov. 1, 1907	Jan. 8, 1908		994 98	73 75	4,263 44	5,258 42	Built in 1907.				Sewerage works.
Morton street, from Endicott street to Salem street.....	Thomas Clougherty.....				Oct. 16, 1907	Dec. 5, 1907		714 61	42 00	4,685 40	5,400 01	Built in 1907.				Sewerage works.
Prince street and North End playground.....	Thomas Clougherty.....				July 24, 1907	Oct. 18, 1907		1,063 18		10,070 43	11,133 61	Built in 1907.				Sewerage works.
Myrtle street, from Revere street to 100 feet south.....	F. E. McCarthy.....	320 00			April 28, 1908	May 8, 1908	256 66	382 82	35 50		382 82	100.8 ft. 15 in.	Pipe.	8½ feet.	Clay and gravel.	Sewerage works.
Contract.																
Congress street, from Franklin street to Milk street.....	J. E. Burns Company.....	†			July 9, 1908	July 16, 1908		945 00			945 00	Paving, 378 sq. yds. at \$2.50.				Sewerage works.
Broad street, from Custom House street to India square.....	D. E. Lynch.....	†			Nov. 3, 1908	Dec. 7, 1908		760 16			†	447.20 ft. at \$1.90; 22 sq. yds. flagging at \$1.40				Sewerage works.
Cooper street, from Washington Street North to Endicott street.....	M. H. Lyne.....				Aug. 11, 1907	Oct. 9, 1907		97 58		4,794 51	4,892 09	Built in 1907.				
Totals.....							\$17,461 17	\$36,380 47								

* Includes \$439.91 on separate systems of drainage sheet. † Contract by Paving Division. ‡ Not completed.

Roxbury.

<i>Day Labor.</i>																
Hoffman street, private land over Stony brook to southeast of Lamartine street.	A. Pitts				Oct. 28, 1907	Feb. 21, 1908	\$310 71	\$378 69	\$8 75	\$424 38	\$803 07	9.55 ft. 12 in.	Pipe.	8 7/8 feet.	Gravel.	Sewerage works.
Phillips street, from Ward street to Longwood avenue.	P. F. Kelley	\$1,006 39			July 22, 1908	Aug. 18, 1908	690 88	1,309 27	113 70		1,309 27	237.93 ft. 24 in.	Pipe.	9 feet.	Gravel.	Sewerage works.
<i>Contract.</i>																
Seaver street, from Harold to Parkview street.	Joseph J. Confrey.				Jan. 3, 1908	April 2, 1908	210 00	2,631 23	5 25	63 00	2,694 23	263.85 ft. 12 in. 236.15 ft. 10 in.	Pipe. Pipe.	8 1/2 feet. 10 1/2 feet.	Rock and gravel.	Sewerage works.
Larkin street, from Hampden to Adams street.	James P. Collins				Nov. 4, 1907	Dec. 26, 1907		178 04	41 75	1,554 07	1,732 11	Built in 1907.				Sewerage works.
Ellis street, from Fulda to Hawthorne street.	George J. Regan				Jan. 2, 1908	June 10, 1908	24 50	549 11			549 11	178.40 ft. 10 in.	Pipe.	9 1/2 feet.	Rock and gravel.	Sewerage works.
Sherwood street, from Norfolk avenue to end of street.	J. Guarino	1,720 00	\$1,231 54	5	Nov. 2, 1908	Nov. 19, 1908	42 00	662 62			*	303.59 ft. 12 in.	Pipe.	8 1/2 feet.	Sand, gravel and cinders.	Sewerage works.
Totals.							\$1,278 09	\$5,708 96								

* Not completed.

Dorchester.

<i>Day Labor.</i>																
Oakland brook, from Edgewater drive to River street.	William Park				June 21, 1907	Nov. 4, 1907		\$32 56		\$28,618 23	\$28,650 78	Built in 1907.				Sewerage works.
Oakland brook, from Rockdale street to railroad.	William Park				Aug. 30, 1906	June 20, 1907		71 62		53,955 80	54,027 42	Built in 1907.				Sewerage works.
Freeport street brook, from Bowdoin street 265 feet east.	William Park				Oct. 3, 1907	Jan. 4, 1908		57 46		5,669 59	5,727 05	Built in 1907.				Sewerage works.
Morton street, from Lucerne street to Blue Hill avenue.	William Park	\$1,366 51			Mar. 18, 1908	May 7, 1908	\$1,926 24	2,373 48	\$146 88		2,373 48	380 ft. 12 in.	Pipe.	9 1/2 feet.	Clay, rock and gravel.	Sewerage works.
Dakota street, from Greenbrier street to Geneva avenue.	William Park	722 25			June 12, 1908	July 9, 1908	893 91	1,193 73	72 75		1,193 73	322.33 ft. 12 in. 60 ft. 10 in.	Pipe. Pipe, catch-basin drain.	6 3/4 feet. 8 feet.	Gravel and sand.	Sewerage works.
<i>Contract.</i>																
Bowdoin street, from Draper street to Hamilton street.	D. E. Lynch				Dec. 26, 1907	Jan. 8, 1908		270 74	4 76	493 93	764 67	Built in 1907.				Sewerage works.
Malta street, from River street to Edgewater drive.	J. J. Confrey				Dec. 23, 1907	April 7, 1908	154 00	1,501 06	11 37	96 88	1,598 84	257.11 ft. 12 in.	Pipe.	10 feet.	Very wet sand and gravel.	Sewerage works.
Payson avenue, from Glendale street 335 feet north.	J. F. Murphy				Dec. 30, 1907	April 25, 1908	281 75	2,184 91	13 18	79 25	2,294 16	256.50 ft. 12 in.	Pipe.	10 feet.	Gravel.	Sewerage works.
Tokio street, from River street to Edgewater drive.	D. Marr & Son.				Dec. 19, 1907	Feb. 10, 1908	52 50	1,169 47	5 63	142 40	1,311 87	Built in 1907.				Sewerage works.
Randolph road, from Rosewood street to Hollingsworth street.	M. H. Lynch				Jan. 1, 1908	Feb. 29, 1908	115 50	1,090 93	14 38	63 00	1,093 93	125.85 ft. 12 in.	Pipe.	10 feet.	Hard ledge, sand and gravel.	Sewerage works.
Randolph road, from River street to Rosewood street.	F. H. Cowin Company.				Sept. 16, 1907	Dec. 21, 1907		224 51		2,056 76	2,281 27	Built in 1907.				Sewerage works.
Favre street, from Oakland street 350 feet northeast.	M. H. Lynch				Dec. 31, 1907	Feb. 24, 1908	139 01	2,399 10	14 00	124 50	2,523 60	149.58 ft. 2 ft., circular. 53 ft. 12 in.	Brick. Pipe.	5 feet. 5 feet.	Gravel, clay and sand.	Sewerage works.
Bellevue street, from Hamilton street to Kane street.	H. T. Bowers				Dec. 30, 1907	Feb. 22, 1908	84 00	1,107 15	10 50	539 32	1,646 47	96 ft. 10 in. 109.65 ft. 12 in. 15 ft. 10 in.	Pipe. Pipe, catch-basin drain.	11 1/2 feet. 7 1/2 feet.	Gravel, sand and rock.	Sewerage works.
Elmo street, from existing sewer northerly to Erie street.	T. F. Malian	325 00	\$174 80	13	May 15, 1908	May 28, 1908	38 50	232 58			232 58	86.11 ft. 10 in.	Pipe.	8 feet.	Gravel.	Sewerage works.
Hamilton street, from existing sewer westerly to Mt. Everett street.	George J. Regan	1,015 00	573 28	18	June 11, 1908	July 20, 1908	136 25	1,120 87	4 76		1,120 87	175.20 ft. 10 in.	Pipe.	10 feet.	Ledge.	Sewerage works.
Harvard street, from Mansborough street to Randolph avenue.	George J. Regan	\$15 00	615 11	16	May 12, 1908	May 20, 1908	28 00	506 18			506 18	250 ft. 12 in.	Pipe.	9 1/2 feet.	Sand and gravel.	Sewerage works.
Howard avenue, from Cunningham street to Dalketh street.	George J. Regan	645 00	337 38	20	May 20, 1908	May 25, 1908	14 00	400 19			400 19	238.45 ft. 12 in.	Pipe.	6 feet.	Sand.	Sewerage works.
Whitney park, from existing sewer 80 feet north-easterly.	George J. Regan	520 00	294 31	12	May 19, 1908	June 3, 1908	26 25	337 05			337 05	78.45 ft. 12 in.	Pipe.	10 1/2 feet.	Solid rock.	Sewerage works.
Train street, from King street to South Munroe terrace.	John Guarino	1,923 00	796 67	10	Sept. 30, 1908	Oct. 31, 1908	87 50	944 07			944 07	800.37 ft. 12 in.	Pipe.	9 feet.	Hard-pan.	Sewerage works.
Codman street, from Dorchester avenue to Washington street.	John Donley	3,185 00	1,715 60	11	Oct. 26, 1908	Dec. 8, 1908	127 75	1,284 75			*	909.72 ft. 12 in.	Pipe.	11 feet.	Hard-pan.	Sewerage works.
Wayland street, from Hartford street 170 feet north-west.	T. H. Connolly	736 00	335 05	11	Nov. 6, 1908	Dec. 17, 1908	122 50	549 57	8 00		*	170.80 ft. 10 in.	Pipe.	8 1/2 feet.	Sand and rock.	Sewerage works.
North Munroe terrace, from Neponset avenue to Train street.	Timothy McCarthy	2,139 00	1,067 70	11	Nov. 14, 1908	Dec. 28, 1908	88 00	1,090 00			*	884.76 ft. 12 in.	Pipe.	9 1/2 feet.	Hard-pan.	Sewerage works.
South Munroe terrace, from Neponset avenue to Train street.	Timothy McCarthy	2,323 00	1,197 13	11	Nov. 27, 1908	Jan. 4, 1909	84 00	1,132 60	1 50		*	973.16 ft. 12 in.	Pipe.	9 1/2 feet.	Hard-pan.	Sewerage works.
Totals.							\$4,399 66	\$21,185 48								

* Not completed.

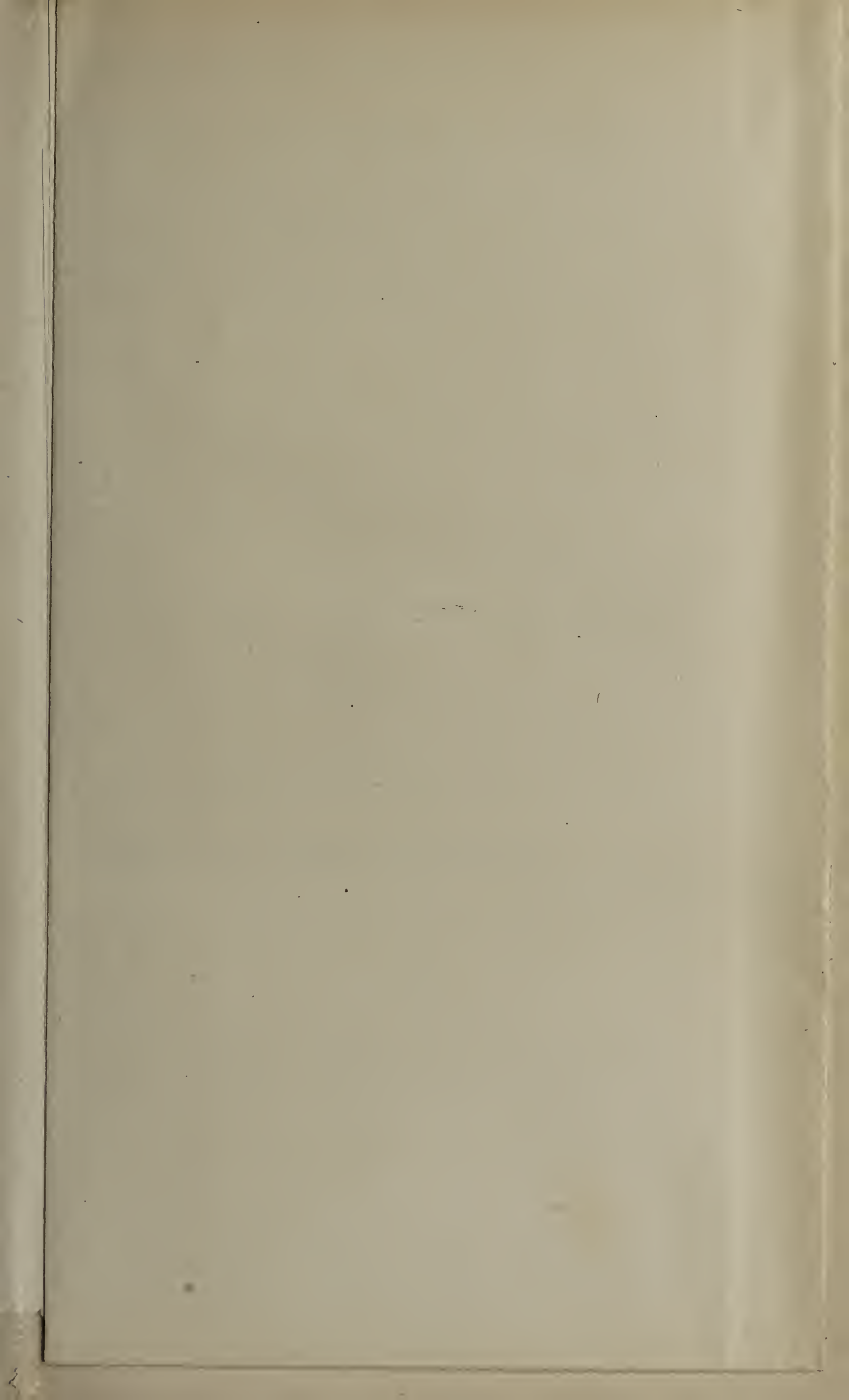
West Roxbury.

<i>Day Labor.</i>																
Canterbury street, at Calder street.	William Park	\$816 00			Oct. 30, 1908	Dec. 8, 1908	\$1,162 47	\$1,664 32	\$84 50		\$1,664 32	35.57 ft. 4 ft.-8 ft. reducer.	Concrete.	7 1/2 feet.	Loam, clay, gravel and sand.	Sewerage works.
<i>Contract.</i>																
Poplar street, outlet, Section 1.	F. Williams Company				Dec. 3, 1906	Dec. 5, 1907		1,583 83		\$12,966 80	14,550 63	Built in 1906 and 1907.				Sewerage works.
Poplar street, outlet, Section 2.	Trimount Contracting Co.				Oct. 14, 1907	Mar. 16, 1908	212 50	3,594 17	15 75	3,214 96	*	39.76 ft. 24 in. 251.36 ft. 15 in.	Brick. Pipe.	11.3 feet. 6.9 feet.	Clay and gravel.	Sewerage works.
Poplar street, outlet, Section 3.	M. H. Lynch				Oct. 10, 1907	Nov. 7, 1907		39 44		2,296 84	2,336 28	Built in 1907.				Sewerage works.
Westover street, from Dunbar street to existing sewer.	William L. Dolan				Nov. 27, 1907	Jan. 20, 1908	14 00	587 83	3 50	1,522 75	2,110 58	Built in 1907.				Sewerage works.
Canterbury street, from Angell street 140 feet west.	A. Cefalo				July 29, 1907	Aug. 23, 1907		41 30		664 99	706 29	Built in 1907.				Sewerage works.
Canterbury street, from Calder street to Angell street.	George J. Regan				Dec. 2, 1907	Dec. 31, 1907		159 47	6 50	596 89	756 36	Built in 1907.				Sewerage works.
Canterbury street, from Talbot avenue high level to Paine street.	George H. Noone				Dec. 19, 1907	Feb. 25, 1908	98 00	1,807 77	14 00	886 03	2,693 80	156.08 ft. 12 in.	Pipe.	11.8 feet.	Sand and gravel.	Sewerage works.
Wachusett street, from Weld Hill street to 630 south-west.	William J. Barry				Oct. 18, 1907	April 7, 1908	127 00	2,094 87	3 50	1,306 74	3,401 61	43.60 ft. 10 in.	Pipe.	10.8 feet.	Gravel and rock.	Sewerage works.
Neponset avenue, from 60 feet west of Stony brook to 160 feet east.	M. H. Lynch				Nov. 21, 1907	Dec. 31, 1907		188 98	12 00	572 89	761 87	Built in 1907.				Sewerage works.
Hawthorne street, from Sycamore street to Heathcote street.	Bruno & Pettiti				Dec. 19, 1907	Jan. 18, 1908		1,792 34	29 75	92 15	1,884 49	Built in 1907.				Sewerage works.
Heathcote street, from Hawthorne street to Poplar street.	W. L. Dolan				Jan. 3, 1908	Jan. 30, 1908	21 00	283 61	8 75	569 89	853 50	Built in 1907.				Sewerage works.
Kittredge street, from 45 feet northeast of Mayo street to 175 feet southwest.	Trimount Contracting Co.				Jan. 2, 1908	Jan. 30, 1908	42 00	588 93	7 00	63 00	651 93	Built in 1907.				Sewerage works.
Centre street, from Spring street to 100 feet northeast Cottage avenue.	A. Cefalo				Aug. 24, 1907	Dec. 5, 1907		470 79		3,817 23	4,288 02	Built in 1907.				Sewerage works.
Mendum street, from Walter street to 340 feet south-east.	George J. Regan				Nov. 13, 1907	Dec. 7, 1907		71 58		726 84	798 42	Built in 1907.				Sewerage works.
Totals.							\$1,676 97	\$14,969 23								

* Not completed.

Charlestown.

Contract.															
Charles street place, Charles street to end of place . . .	Thomas A. Nolan	\$1,240 00	\$481 35	12	July 9, 1908	July 30, 1908	\$66 50	\$412 79		\$412 79	309.78 ft. 10 in.	Pipe.	10.7 feet.	Hard clay.	Sewerage works.



SEWERS AND SURFACE DRAINS BUILT BY THE CITY, FEBRUARY 1, 1908, TO JANUARY 31, 1909.

Roxbury.												
<i>Day Labor.</i>												
Wyoming street, from Humboldt avenue to Wabeno street.	A. Pitts.....	Dec. 16, 1907	Feb. 20, 1908	\$443 79	\$774 47	\$170 00	\$3,038 83	\$3,813 30	Built in 1907.			Separate systems
Avenue Louis Pasteur, between Board of Survey street No. 219 and Longwood avenue, southeast side.	F. E. McCarthy.....	Dec. 31, 1908		2,122 02	2,166 02			*	Excavating and piles.	13 feet.	Mud and filling.	Separate systems
<i>Contract.</i>												
Centre street, from Amory street to Oakview terrace..	J. J. Coughlan Construction Company.....	Nov. 19, 1906	April 26, 1907		1,800 05		13,432 19	15,322 24	Built in 1907.			Separate systems
Totals.....				\$2,565 81	\$4,830 54							

* Not completed.

[illegible]

not completed

[illegible]

Brighton.																
Day Labor.																
Leopard brook, Section 3.....	F. E. McCarthy A. Pitts				Nov. 11, 1907	Aug. 5, 1908	\$13,030 81	\$23,053 07	\$1,540 80	\$10,078 55	\$33,131 62	48 ft. 5 ft. 1,029.67 ft. 3 ft. 6 in. 236.33 ft. 3 ft. 372.90 ft. 3 ft.	Brick. Brick. Brick. Concrete.	16.7 feet. 14.7 feet. 13.8 feet. 14.1 feet.	Sand, gravel and clay.	Separate systems.
Leopard brook, Section 4.....	A. Pitts	\$37,620 00			July 16, 1908		11,184 08	16,815 14	1,607 45		*	177.12 ft. 3 ft. 267 ft. 3 ft. 6 in. 756 ft. 4 ft. 110.7 ft. 12 in. 634.35 ft. 10 in. 50.8 ft. 10 in.	Concrete. Concrete. Concrete. Pipe. Catch-basin drain.	10.4 feet. 11 feet. 11.9 feet.	Sand, gravel and clay.	Separate systems.
Contract.																
Commonwealth terrace, from Allston street, 300 feet west.	John McCourt.....	1,158 00	\$1,158 59	8	Sept. 11, 1908	Nov. 2, 1908	190 70	1,370 61			1,370 61	299.64 ft. 10 in.	Pipe.	10 feet.	Clay, gravel and rock.	Separate systems.
Market street, Spring street to Wieklow street.....	T. J. Young Company.....				Dec. 17, 1907	April 8, 1908	56 00	1,015 10								
Grey road, 250 feet north from Cummings road.....	T. J. Young Company.....				Oct. 13, 1905	Oct. 23, 1905		69 03		1,300 85	2,315 95	Built in 1907				
										438 28	507 33	Built in 1905.				
Totals.....							\$24,461 59	\$42,322 97								

* Not completed.

[illegible]

SEWERS BUILT BY PRIVATE PARTIES, FEBRUARY 1, 1908, TO JANUARY 31, 1909.

South Boston.

STREET.	Between	Length in Feet.	Dimensions and Materials.	Average Cut.	Character of Material.
Scott street.....	East Eighth street and East Seventh street..	198.65	12-inch pipe sewer.		

Brighton.

Princeton avenue.....	Harvard avenue and Allston square.....	580.21 131.20	12-inch pipe. 10-inch pipe.		
Quint avenue.....	Princeton avenue, 463 feet north.....	210.70	10-inch pipe.		
Radcliffe road.....	Quint avenue, 273 feet west.....	268.05	10-inch pipe.		
Richards street.....	Washington street, northerly.....	129.27	10-inch pipe.		
Upland road.....	Brooks street and Dunboy street.....	454.21	10-inch pipe.		

West Roxbury.

Prince street.....	810 feet north of Arborway and Pond street..	91.80	10-inch pipe.		
Garden street extension.....	Maple street, 220 feet easterly.....	222.65	10-inch pipe.		
Danville street.....	Bellevue street and Wren street.....	339.76	10-inch pipe.		
Washington street.....	At Forest Hills square.....	162.60	3 feet by 4 feet, brick.		
Johnswood road.....	Southerly section.....	169.98 160.47	10-inch pipe surface. 10-inch pipe sewer.		
Heldun street.....	Gardner street, 410 feet north.....	409.83	10-inch pipe.		
Halliday street.....	Neponset avenue and Bourne street.....	489.54 379.60	15-inch pipe 12-inch pipe.		

Sewers Built by Private Parties. — *Concluded.*
North Dorchester.

STREET.	Between	Length in Feet.	Dimensions and Materials.	Average Cut.	Character of Material.
Bentham road.....	Draper street and Robinson avenue.....	233.35	12-inch pipe.		
Intervale street.....	Normandy street, westerly.....	226.70	10-inch pipe.		
Pleasant terrace.....	Off Pleasant street.....	178.25	10-inch pipe.		
Rowell street.....	Hancock street and Cushing avenue.....	510.20	10-inch pipe.		
Vaughan avenue extension and Wales court...	Devon street and Wales place.....	337.00	10-inch pipe.		
Whittemore terrace.....	Hancock street and end of terrace.....	234.70	10-inch pipe.		

South Dorchester.

Assabet street.....	Neponset avenue and Train street.....	409.97	12-inch pipe.		
Deering road.....	Blue Hill avenue and 433 feet northwesterly..	444.08	12-inch pipe.		
Randolph road.....	Harvard street and 425 feet easterly.....	425.00	12-inch pipe.		

City Proper.

City Hospital grounds.....	Massachusetts avenue and Burnham Building,	221.60	12-inch pipe sewer.		
City Hospital grounds	Massachusetts avenue and Burnham Building,	81.25	10-inch pipe surface drain.		
		43.68	8-inch pipe surface drain.		

Sewer Contracts Awarded, 1908-09.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Washburn street, between Boston street and Dorchester avenue.	Mark H. Lynch (12 bidders.)	Feb. 26, 1908.	100 cubic yards earth excavation, below grade, at \$1 cubic yard. 5 cubic yards earth excavation, outside trench, at \$1 cubic yard. 1 cubic yard rock excavation at 10c. cu. yd. 6 M. feet, board measure, spruce sheeting at \$22 M. feet. 4 M. feet, board measure, spruce platforms at \$22 M. feet. 2 cubic yards concrete at \$3 cubic yard, 476 linear feet 12-inch pipe sewer at \$1.50 linear foot. 20 linear feet 10-inch pipe catch-basin drain at \$1.05 linear foot. 285 linear feet house sewer removed at 50c. linear foot. 40 linear feet house drains to be laid at 75c. linear foot. 90 linear feet old house drain rebuilt at 75c. linear foot. 3 manholes built at \$48 each. 50 cubic yards sand or gravel refill at \$1 cubic yard. 476 linear feet 6-inch pipe underdrain at 20c. linear foot. 1 manhole rebuilt and connected with sewer at \$12. 25 square yards pavement taken up and relaid at 50c. square yard.	\$2,070 46	\$2,047 00

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Williams street, between Meehan street and Stedman street, West Roxbury.	Coughlan & Sheils Company... (7 bidders.)	April 13, 1908.	390 linear feet earth excavation for 4-foot 3-inch by 4-foot 9-inch brick conduit at \$4.50 linear foot. 10 cubic yards earth excavation, below grade, at \$1.50 cubic yard. 5 cubic yards extra earth excavation at \$1.50 cubic yard. 10 cubic yards rock excavation at \$5 cubic yard. 153 cubic yards brick masonry in Portland cement at \$6 cubic yard. 5 cubic yards concrete of Portland cement at \$5 cubic yard. 15.6 M. feet, board measure, spruce sheeting at \$23 M. feet. 1 M. feet, board measure, spruce platforms, etc., at \$40 M. feet. 24 linear feet 10-inch pipe surface drain at \$1 linear foot. 10 linear feet 18-inch pipe surface drain at \$1 linear foot. 390 linear feet 6-inch pipe underdrain at 15c. linear foot. 34 pipe connections with brick conduit at 25c. each. 10 cubic yards gravel refill at \$1 cubic yard. 2 catch-basins built at \$30 each. 1 manhole built on brick surface drain at \$30. 44 linear feet of old brook on Williams street filled and surfaced at 60c. linear foot. 8 linear feet old 4-foot by 3-inch brick surface drain removed at \$1.50 linear foot. 18 linear feet old 30-inch pipe surface drain removed at \$1 linear foot.	\$4,349 89	\$5,341 00

Ellis street, between Fulda street and Hawthorne street, Roxbury.	George J. Regan..... (11 bidders.)	May 9, 1908.	56 cubic yards earth excavation, above grade, at 70c. cubic yard. 1 cubic yard earth excavation, outside trenches, at \$2 cubic yard. 114 cubic yards rock excavation at \$3 cubic yard. 200 feet, board measure, spruce sheeting at 1c. foot. 1 cubic yard concrete at 1c. cubic yard. 160 linear feet 10-inch pipe sewer at 40c. linear foot. 4 linear feet 6-inch pipe house drain at \$1 linear foot. 6 linear feet old house drain rebuilt at \$1 linear foot. 3 manholes built at \$49 each. 1 cubic yard brick masonry at \$7 cubic yard. 50 linear feet 6-inch pipe underdrain at 10c. linear foot. 1 old lamp hole to be removed at \$5.	497 07	970 00
Elmo street, from existing sewer north-westerly to Erie street, Dorchester.	Thomas F. Mahan. (13 bidders.)	May 9, 1908.	1 cubic yard earth excavation, below grade, at 1c. cubic yard. 1 cubic yard earth excavation, outside trenches, at 1c. cubic yard. 10 cubic yards rock excavation at \$1 cubic yard. 200 feet, board measure, spruce sheeting at 1c. cubic yard. 1 cubic yard Portland cement concrete at 1c. cubic yard. 86 linear feet 10-inch pipe sewer at \$1.50 linear foot. 1 manhole built at \$32. 1 cubic yard brick masonry at 1c. cubic yard. 5 cubic yards gravel and sand refill at 25c. cubic yard. 50 linear feet 6-inch pipe underdrain at 1c. linear foot. 1 old manhole rebuilt at \$2.	179 51	325 00

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Hamilton street from existing sewer westerly to Mt. Everett street, Dorchester.	George J. Reagan... (18 bidders.)	May 9, 1908.	65 cubic yards earth excavation, above grade, at 65c. cubic yard. 1 cubic yard earth excavation, outside trenches, at \$1.50 cubic yard. 130 cubic yards rock excavation at \$3 cubic yard. 200 feet, board measure, spruce sheeting at 1c. foot. 1 cubic yard concrete at 1c. cubic yard. 175 linear feet 10-inch pipe sewer at 45c. linear foot. 25 linear feet house sewer removed and handling sewage at 25c. linear foot. 4 linear feet old drain rebuilt at \$1 linear foot. 1 manhole built at \$50. 1 cubic yard brick masonry at 1c. cubic yard. 50 linear feet 6-inch pipe underdrain at 1c. linear foot.	\$773 25 Includes extra work amounting to \$92.28.	\$1,015 00
Gold street, from existing sewer southerly to E street, South Boston.	William J. Rafferty & Co..... (9 bidders.)	May 9, 1908.	1 cubic yard earth excavation, below grade, nothing. 1 cubic yard earth excavation, outside trenches, nothing. 1 cubic yard rock excavation at \$5 cubic yard. 3 M. feet, board measure, spruce sheeting nothing 1 cubic yard concrete at \$5 cubic yard. 165 linear feet 12-inch pipe sewer at \$1.36 linear foot. 60 linear feet house sewer removed, including handling sewage, at 25c. linear foot. 20 linear feet 6-inch pipe house drain at 75c. linear foot. 2 manholes built at \$56 each. 1 cubic yard brick masonry at \$5 cubic yard. 1 cubic yard gravel and sand refill, nothing. 100 linear feet 6-inch pipe underdrain, nothing.	395 69	645 00

Harvard street, between Hansborough street and Randolph avenue, Dorchester.	George J. Regan..... (16 bidders.)	May 9, 1908.	10 cubic yards earth excavation, below grade, at \$1 cubic yard. 10 cubic yards earth excavation, outside trenches, at 1c. cubic yard. 25 cubic yards rock excavation at \$3 cubic yard. 1 M. feet, board measure, spruce sheeting at \$15 M. feet. 1 M. feet, board measure, spruce platforms at 1c. M. feet. 5 cubic yards concrete at \$7 cubic yard. 250 linear feet 15-inch pipe sewer at \$1.50 linear foot. 1 manhole built at \$45. 10 cubic yards gravel and sand refill at \$1 cubic yard. 250 linear feet 6-inch pipe underdrain at 20c. linear foot.	463 30	815 00
Howard avenue, between Cunningham street and Dalkeith street, Dorchester.	George J. Regan..... (20 bidders.)	May 9, 1908.	1 cubic yard earth excavation, below grade, at 1c. cubic yard. 1 cubic yard earth excavation, outside trenches, at \$2 cubic yard. 1 cubic yard rock excavation at \$5 cubic yard. 200 feet, board measure, spruce sheeting at 1c. per foot. 1 M. feet, board measure, spruce platforms at 1c. M. feet. 1 cubic yard concrete at \$5 cubic yard. 239 linear feet 12-inch pipe sewer at 95c. linear foot. 2 manholes built at \$40 each. 1 cubic yard brick masonry at \$6 cubic yard. 30 cubic yards gravel and sand refill at 1c. cubic yard. 200 linear feet 6-inch pipe underdrain at 1c. cubic yard. 1 old manhole rebuilt and connected with sewer at \$10.	360 53	645 00

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Whitney park, between existing sewer and 80 feet northeasterly, Dorchester.	George J. Regan..... (12 bidders.)	May 9, 1908.	10 cubic yards earth excavation, above grade, at 65c. cubic yard. 5 cubic yards earth excavation, outside trenches, at 1c. cubic yard. 70 cubic yards rock excavation at \$3.45 cubic yard. 1 M. feet, board measure, spruce sheeting at 1c. M. feet. 1 M. feet, board measure, spruce platforms at 1c. M. feet. 1 cubic yard concrete at 1c. cubic yard. 80 linear feet 12-inch pipe sewer at 45c. linear foot. 8 linear feet old house drain rebuilt at 1c. linear foot. 5 cubic yards gravel and sand refill at 1c. cubic yard. 10 linear feet 6-inch pipe underdrain at 1c. linear foot. 1 old manhole rebuilt at \$5. 1 8-inch pipe chimney built at \$5.	\$301 50	\$520 00
Charles street place, between Charles street and end of place, Charlestown.	Thomas A. Nolan..... (12 bidders.)	June 27, 1908.	1 cubic yard earth excavation, below grade, at 47c. cubic yard. 10 cubic yards earth excavation, outside trenches, at 39c. cubic yard. 10 cubic yards rock excavation at \$3.75 cubic yard. 5 M. feet, board measure, spruce sheeting at 1c. M. feet. 10 cubic yards concrete at \$7.90 cubic yard. 310 linear feet 10-inch pipe sewer at 66c. linear foot. 12 linear feet 6-inch pipe chimneys at 16c. linear foot.	314 39	1,240 00

Cleveland street, between Prescott street and point 200 feet easterly, East Boston.	Andrew M. Cusack..... (5 bidders.)	June 27, 1908.	60 linear feet old drain rebuilt at 98c. linear foot. 2 manholes built at \$43 each. 10 cubic yards gravel and sand refill at 1c. cubic yard. 50 linear feet 6-inch pipe underdrain at 18c. linear foot. 1 old manhole in vert rebuilt at 1c. 1 cubic yard earth excavation, below grade, at \$1 cubic yard. 5 cubic yards earth excavation, outside trenches, at \$1 cubic yard. 10 cubic yards rock excavation at \$2 cubic yard. 2 M. feet, board measure, spruce sheeting at \$20 M. feet. 100 feet, board measure, spruce platforms at \$10 M. feet. 2 cubic yards concrete at \$6 cubic yard. 200 linear feet 10-inch pipe sewer at \$1.24 linear foot. 18 linear feet 6-inch pipe chimney at 40c. linear foot. 1 manhole built at \$29. 5 cubic yards gravel and sand at \$1 cubic yard. 25 linear feet 6-inch pipe underdrain at 22c. linear foot. 1 invert to be rebuilt in old manhole at \$15. 1,100 linear feet, more or less, earth excavation and refilling for double channels 8 feet 3 inches by 10 feet 6 inches, including removal of present channels, at \$20 linear foot. 100 cubic yards, more or less, earth excavation, below grade, at \$2 cubic yard. 10 cubic yards, more or less, extra earth excavation at \$2 cubic yard. 10 cubic yards, more or less, rock at \$5 cubic yard. 237 cubic yards, more or less, brick masonry in Portland cement at \$12 cubic yard.	300 08	650 00
Rebuilding old Stony brook channel, part of Sections 3 and 4, in Rogers avenue, Roxbury, from Huntington avenue 1,100 feet south.	Peter W. Hill..... (12 bidders.)	Aug. 4, 1908.	Final pay- ment not made.	81,966 00	

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09. — Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Rebuilding old Stony brook channel, part of Sections 3 and 4, in Rogers avenue, Roxbury, from Huntington avenue 1,100 feet south.	Peter W. Hill..... (12 bidders.)	Aug. 4, 1908.	1,100 linear feet, more or less, Portland cement reinforced concrete, double channel conduit: (a.) Arches reinforced with Monolith steel inverts, and side walls also reinforced with steel bars, at \$30 linear foot. (b.) Arches reinforced with I-beams, Kahn No. 2 rib metal and wire lathing, side walls and inverts to correspond, reinforced with steel bars, at \$33 linear foot. (c.) Arches reinforced with steel bars and side walls and inverts to correspond, reinforced with steel bars, at \$33 linear foot. 14 cubic yards, more or less, plain concrete at \$8 cubic yard. 1 M. feet, board measure, more or less, 5-inch tongued and grooved Georgia pine sheeting, left in place, at \$60 M. feet. 1 M. feet, board measure, more or less, 2-inch tongued and grooved spruce sheeting, left in place, at \$50 M. feet. 53 M. feet, board measure, more or less, spruce sheeting, left in place, at \$25 M. feet. 2 M. feet, board measure, more or less, spruce for permanent use, other than sheeting and shoring, at \$30 M. feet. 22 M. feet, board measure, more or less, spruce for posting arches at \$35 M. feet. 2,200 linear feet, more or less, 8-inch pipe underdrain at 25c. linear foot. 100, more or less, pipe connections at \$1 each. 100 cubic yards, more or less, gravel refill at \$2 cubic yard. 1,000 linear feet, more or less, spruce piles driven and cut off at 20c. linear foot. 2,200 linear feet, more or less, 12-inch pipe house sewer at 25c. linear foot. 10 manholes, more or less, to be built at \$60 each.		

Rebuilding, old Stony brook channel, part of Section 4, in Rogers avenue, private land, Ruggles and Whittier streets, Roxbury.	William J. Barry..... (4 bidders.)	Sept. 9, 1908.	50 linear feet, more or less, old drain relaid at \$1 linear foot. For furnishing Akron or Portland pipe, 70¢ per cent discount from list prices. 2,750 square yards, more or less, of water-proofing at 40c. square yard. 314 linear feet, more or less, earth excavation and refilling for double channels 8 feet 3 inches by 10 feet 6 inches, including removal of present channels, at \$22.50 linear foot. 183 linear feet, more or less, earth excavation and refilling 11-foot by 9-foot conduit and 2-foot by 3-foot brick sewer, siphon and two manholes, at \$18.50 linear foot. Excavating and refilling flushing machine chamber attached to 11-foot by 9-foot conduit, sum of \$50. Excavating and refilling in Whittier street, at connection of 11-foot by 9-foot conduit with present channels and with Section 5 for attached and adjacent 12-inch pipe sewer, etc., sum of \$100. 100 cubic yards, more or less, earth excavation, below grade, at \$2.50 cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at \$5 cubic yard. 10 cubic yards, more or less, rock at \$2 cubic yard. 106 cubic yards, more or less, brick masonry at \$13.50 cubic yard. 1,640 cubic yards, more or less, Class A concrete at \$7 cubic yard. 5 cubic yards, more or less, Class B concrete at \$10 cubic yard. 1 M. feet, board measure, more or less, 5-inch tongued and grooved Georgia pine sheathing, left in place, at \$25 M. feet. 1 M. feet, board measure, more or less, 2-inch tongued and grooved spruce sheathing, left in place, at \$25 M. feet. 21 M. feet, board measure, more or less, spruce sheathing, left in place, at \$22 M. feet.	Final payment not made.	\$36,000 00
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The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908=09.—Continued.

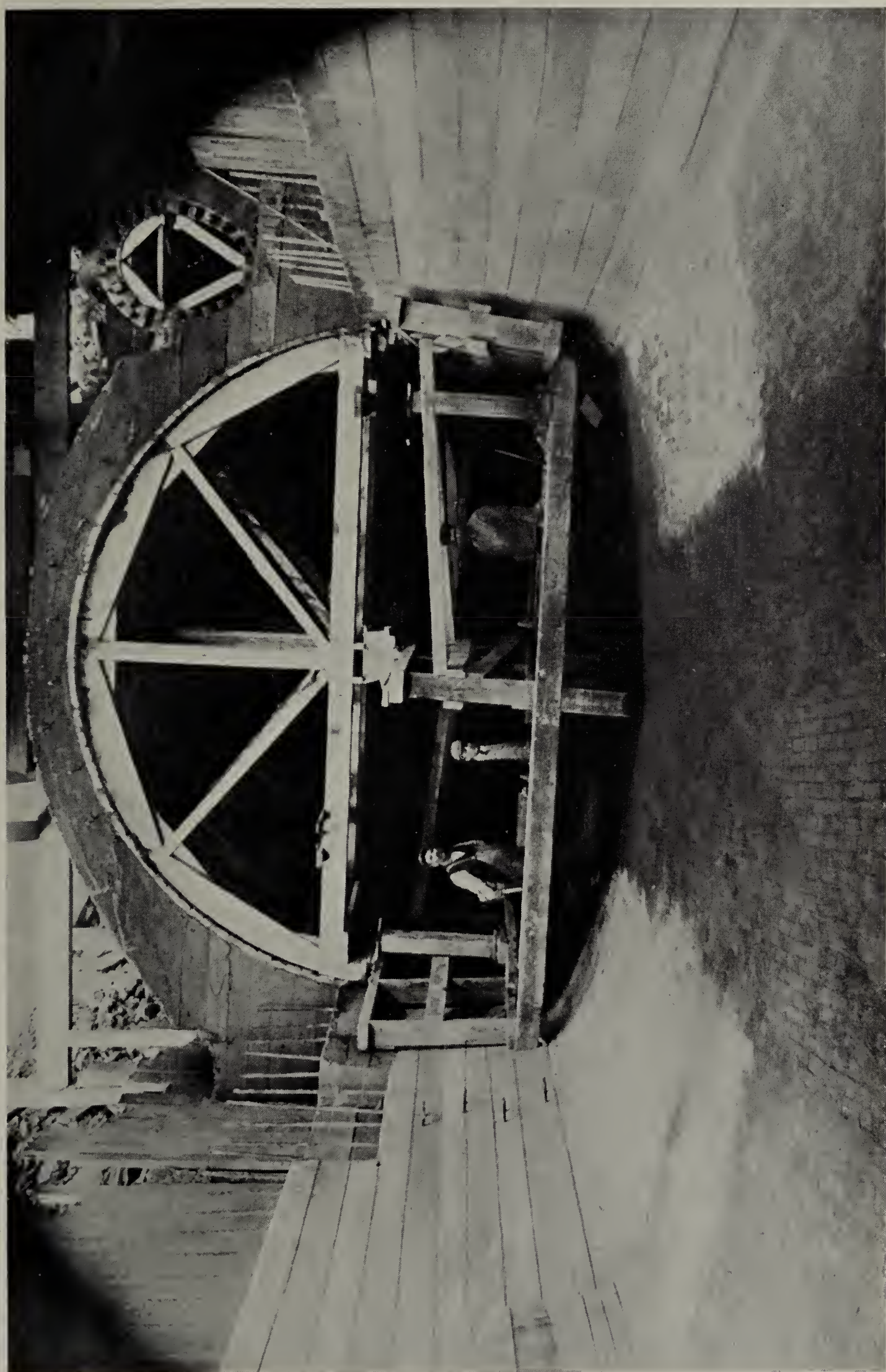
CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Rebuilding old Stony brook channel, part of Section 4, in Rogers avenue, private land, Ruggles and Whittier streets, Roxbury.	William J. Barry..... (4 bidders.)	Sept. 9, 1908.	1 M. feet, board measure, more or less, spruce for permanent use, other than sheeting, etc., at \$25 M. feet. 830 linear feet, more or less, 8-inch and 10-inch pipe underdrain at 15c. linear foot. 40 pipe connections, more or less, at 50c. each. 50 linear feet, more or less, old drains relaid at 50c. linear foot. 490 linear feet, more or less, 12-inch house sewer at 30c. linear foot. 20 linear feet, more or less, 12-inch and 16-inch double iron pipe siphon at \$1.50 linear foot. 33 linear feet, more or less, 12-inch house sewer at \$1.50 linear foot. 47 linear feet, more or less, pipe house drain at \$1.50 linear foot. For placing flushing gate frames in chamber in Rogers avenue, sum of \$50. 6 manholes, more or less, built on pipe sewers at \$45 each. 2 manholes, more or less, built on siphon at \$45 each. 50 cubic yards, more or less, gravel refill at 50c. cubic yard. 1,000 linear feet, more or less, spruce piles driven and cut at 10c. linear foot. 1,200 square yards, more or less, waterproofing at 20c. square yard. For furnishing Akron or Portland pipe, 70 per cent discount from list prices. 68 tons, more or less, steel I-beams at \$40 ton of 2,000 pounds. 51 tons, more or less, steel rods or bars at \$40 per ton of 2,200 pounds. 5,520 square feet, more or less, Kahn No. 2 rib metal at 9c. square foot. 430 square yards, more or less, Kahn No. 2 rib lathing at 20c. square yard.		

Rebuilding old Stony brook channel, Section 5, in Whittier street, Roxbury, between Ruggles street and Downing street.	Thomas J. Young Company..... (8 bidders.)	Aug. 26, 1908.	693 linear feet, more or less, earth excavation and backfilling for double channeled reinforced concrete conduit, 8 feet 3 inches by 9 feet 6 inches, at \$23.75 linear foot. 228 linear feet, more or less, earth excavation and backfilling for reinforced concrete conduit, 8 feet by 6 feet, at \$10.25 linear foot. 42 linear feet earth excavation and backfilling for reinforced concrete conduit, 11 feet by 7 feet 6 inches, at \$16.75 linear foot. 25 cubic yards, more or less, earth excavation, below grade, at \$3 cubic yard. 200 cubic yards, more or less, extra earth excavation at \$1.25 cubic yard. 10 cubic yards, more or less, rock excavation at \$5 cubic yard. 200 cubic yards, more or less, brick masonry in Portland cement at \$13.50 cubic yard. 2,848 cubic yards, more or less, Class A concrete at \$7.75 cubic yard. 350 cubic yards, more or less, Class B concrete at \$7 cubic yard. 78 tons, more or less, steel rods or bars at \$37.50 ton. 41 tons, more or less, I-beams at \$40 ton. 11,200 square feet, more or less, Kahn rib metal No. 2 at 8c. square foot. 280 square yards, more or less, Kahn rib lathing No. 2 at 15c. square yard. 1 M. feet, board measure, more or less, 3-inch spruce tongued and grooved sheeting at \$50 M. feet. 75 M. feet, board measure, more or less, spruce sheeting at \$20 M. feet. 3 M. feet, board measure, more or less, spruce, other than sheeting, etc., at \$40 M. feet. 1,650 linear feet, more or less, 8-inch or 10-inch pipe underdrain at 15c. linear foot. 75 pipe connections, more or less, at 25c. each. 108 linear feet, more or less, 15-inch, 12-inch or 10-inch pipe house sewer in separate trench at \$1.25 linear foot.	Final payment not made.	\$70,025 00
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The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908=09. — Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Rebuilding old Stony brook channel, Section 5, in Whittier street, Roxbury, between Ruggles street and Downing street.	Thomas J. Young Company.... (8 bidders.)	Aug. 26, 1908.	1,288 linear feet, more or less, 12-inch or 10-inch pipe house sewer in main trench attached to or between conduit at 25c. linear foot. 34 linear feet, more or less, double iron pipe, 30-inch by 12-inch siphon, at \$1.50 linear foot. 100 linear feet, more or less, old drains relaid at 50c. linear foot. 50 cubic yards, more or less, gravel refill at \$1.50 cubic yard. 28,500 linear feet, more or less, spruce piles at 15c. linear foot. 17 manholes, more or less, on house sewer at \$40 each. 2 manholes, more or less, on siphon at \$300 each. 1 old catch-basin, or more, rebuilt at \$15 each. Pipe furnished, Akron or Portland pipe, 72 per cent discount from list price. 2,140 square yards, more or less, waterproofing at 75c. square yard. 3 connections, more or less, with old sewer at \$10 each.		
Building Stony brook conduit in Meehan street and private land, Section 5, West Roxbury.	Coughlan & Sheils Company.... (10 bidders.)	Aug. 11, 1908.	908 linear feet, more or less, earth excavation and refilling for 20-foot by 16-foot concrete conduit and 2-foot 8-inch by 4-foot brick sewer, including removal of existing stone-work of present channel, at \$27.30 linear foot. 600 cubic yards, more or less, earth excavation, below grade, at \$1.50 cubic yard. 48 linear feet, more or less, excavation and refill for 9-foot conduit, above grade, at \$13.42 linear foot.	Final payment not made.	\$120,000 00



20-FOOT BY 16-FOOT STONY BROOK CONDUIT, AND LOW LEVEL SEWER.

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75 cubic yards, more or less, extra earth excavation at 75c. cubic yard.
50 cubic yards, more or less, rock at \$4 cubic yard.
636 cubic yards, more or less, brick masonry in Portland cement at \$14 cubic yard.
3,277 cubic yards, more or less, concrete, of Portland cement for arches at \$7 cubic yard.
3,535 cubic yards, more or less, concrete of Portland cement for invert and side walls at \$7 cubic yard.
52.5 M. feet, board measure, 5-inch tongued and grooved Georgia pine sheeting, left in place, at \$60 M. feet.
47.88 M. feet, board measure, 3-inch tongued and grooved Georgia pine sheeting, left in place, at \$60 M. feet.
23.52 M. feet, board measure, 2-inch tongued and grooved spruce sheeting, left in place, at \$45 M. feet.
54.70 M. feet, board measure, more or less, spruce sheeting, left in place, at \$30 M. feet.
1 M. feet, board measure, more or less, spruce other than sheeting and shoring, at \$60 M. feet.
910 linear feet, more or less, 10-inch pipe under-drain at 30c. linear foot.
100 linear feet, more or less, 6-inch pipe under-drain at 30c. linear foot.
40 linear feet, more or less, 10-inch pipe surface drain at \$1.25 linear foot.
40 linear feet, more or less, 6-inch house sewer removed at \$1 linear foot.
10 linear feet, more or less, 6-inch house sewer laid at \$1 linear foot.
30 linear feet, more or less, 12-inch spiral riveted steel pipe at \$3 linear foot.
50 linear feet, more or less, pipe to connect existing drains at \$1 linear foot.
4 catch-basins, more or less, at \$60 each.
95 pipe connections, more or less, at 50c. each.
For furnishing Akron or Portland pipe, 70 per cent discount from list price.
600 cubic yards, more or less, gravel refill at \$1.40 cubic yard.

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09. — *Continued.*

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Building Stony brook conduit in Meehan street and private land, Section 5, West Roxbury.	Coughlan & Sheils Company . . . (10 bidders.)	Aug. 11, 1908.	945 linear feet, more or less, wooden flume at \$8 linear foot. For underpinning, supporting and protecting the buildings on the line of the work, sum of \$100. 60 square yards, more or less, macadam to a depth of 6 inches at 75c. square yard. 90 cubic yards, more or less, of riprap at \$1.50 cubic yard. For removing the wooden bridge covering the channel on Keyes street, sum of \$50. 67 cubic yards, more or less, old concrete removed at \$4 cubic yard. 35 cubic yards, more or less, old riprap removed at 50c. cubic yard. For removing wooden screen, wooden bulkhead, 46 linear feet of 15-inch spiral riveted pipe and 10 cubic yards, more or less, of concrete around pipe, sum of \$50. 18 cubic yards, more or less, old brick bulkhead and piers removed at \$2.50 cubic yard.		
Commonwealth terrace, between Aliston street and point about 300 feet west, Brighton.	John McCourt (8 bidders.)	Aug. 31, 1908.	1 cubic yard, more or less, earth excavation, below grade, at 60c. cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at \$1.25 cubic yard. 230 cubic yards, more or less, rock excavation at \$3.85 cubic yard. 1 M. feet, board measure, more or less, spruce sheeting at \$10 M. feet. 1 cubic yard, more or less, concrete at \$6 cubic yard. 300 linear feet 10-inch pipe sewer at 50c. linear foot. 12 linear feet 6-inch pipe chimney at 27c. linear foot. 2 manholes built at \$45 each. 1 cubic yard, more or less, gravel and sand refill at \$2 cubic yard. 1 old manhole invert rebuilt at \$5.	\$1,144 35	\$1,158 00

Richards avenue, between Hyde Park avenue and Hyde Park line, West Roxbury.	Andrew M. Cusack..... (11 bidders.)	Sept. 21, 1908.	2 cubic yards, more or less, earth excavation, below grade, at 50c. cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at 50c. cubic yard. 230 cubic yards, more or less, rock excavation at \$3.40 cubic yard. 2 M. feet, board measure, more or less, spruce sheeting at \$1 M. feet. 2 cubic yards, more or less, concrete at \$2 cubic yard. 575 linear feet 10-inch pipe sewer at 92c. linear foot. 20 linear feet 6-inch pipe chimney at 20c. linear foot. 10 linear feet old drain rebuilt at 50c. linear foot. 2 manholes built at \$39 each. 5 cubic yards, more or less, gravel or sand refill at 70c. cubic yard. 50 linear feet 6-inch pipe underdrain at 15c. linear feet. 1 special inlet built at \$10.	1,115 56	2,588 00
Train street, between King street and South Munroe terrace, Dorchester.	John Guarino..... (10 bidders.)	Sept. 25, 1908.	2 cubic yards, more or less, earth excavation, below grade, at 1c. cubic yard. 2 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard. 10 cubic yards, more or less, rock excavation at 5c. cubic yard. 1 M. feet, board measure, more or less, spruce sheeting at 1c. M. feet. 1 M. feet, board measure, more or less, spruce platforms at 2c. M. feet. 2 cubic yards, more or less, concrete at 5c. cubic yard. 800 linear feet 12-inch pipe sewer at 80c. linear foot. 10 linear feet old drain rebuilt at \$1 linear foot. 4 manholes built at \$35 each. 2 cubic yards, more or less, gravel or sand refill, nothing. 100 linear feet 6-inch pipe underdrain at 1c. linear foot. 1 manhole invert rebuilt at \$5.	796 07	1,920 00

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Arden street, between Belgrade avenue and Colberg avenue, West Roxbury.	Andrew M. Cusack..... (7 bidders.)	Sept. 28, 1908.	1 cubic yard, more or less, earth excavation, below grade, at 25c. cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at 25c. cubic yard. 20 cubic yards, more or less, rock excavation at \$3.90 cubic yard. 2 M. feet, board measure, more or less, spruce sheeting at \$1 M. feet. 2 cubic yards, more or less, concrete at \$1 cubic yard. 290 linear feet 10-inch pipe sewer at 84c. linear foot. 1 10-inch slant to be placed in old brick sewer at \$3. 2 manholes built at \$38 each. 1 cubic yard, more or less, gravel or sand refill at 50c. cubic yard. 60 linear feet 6-inch pipe underdrain at 25c. linear foot.	\$360 29	\$798 00
Ashley street, between Bennington street and Breed street, East Boston.	G. M. Bryne Company*..... (6 bidders.)	Sept. 29, 1908.	250 cubic yards, more or less, earth excavation, below grade, at \$1 cubic yard. 10 cubic yards, more or less, earth excavation, outside trenches, at \$1 cubic yard. 5 cubic yards, more or less, rock excavation at \$5 cubic yard. 6 M. feet, board measure, more or less, spruce sheeting at \$25 M. feet. 2 M. feet, board measure, more or less, spruce platform at \$35 M. feet 20 cubic yards, more or less, concrete at \$8 cubic yard. 700 linear feet 10-inch pipe sewer at \$1.15 linear foot. 120 linear feet old drain rebuilt at 60c. linear foot. 4 manholes built at \$35 each. 250 cubic yards gravel or sand refill at \$1.25 cubic yard. 200 linear feet 6-inch pipe underdrain at 35c. linear foot. 1 manhole invert rebuilt at \$10.	1,641 34 Including extra work amounting to \$110.81.	3,625 00

Perkins street, between Canterbury street and Grew avenue, West Roxbury.	DeMarco & Cartullo..... (11 bidders.)	Oct. 7, 1908.	1 cubic yard, more or less, earth excavation, below grade, at 1c. cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard. 25 cubic yards, more or less, rock excavation at \$3 cubic yard. 2 M. feet, board measure, more or less, spruce sheeting at \$25 M. feet. 1 cubic yard, more or less, concrete at \$6 cubic yard. 650 linear feet 10-inch pipe sewer at 80c. linear foot. 18 linear feet 6-inch pipe chimney at 50c. linear foot. 10 linear feet old drain rebuilt at 50c. linear foot. 3 manholes built at \$35 each. 1 cubic yard, more or less, gravel or sand refill at 1c. cubic yard. 10 linear feet, more or less, 6-inch pipe under-drain at 10c. linear foot. 1 manhole invert rebuilt at \$5.	722 29	1,950 00
West street, between Orange street and Bellevue avenue, West Roxbury.	Antony Cefalo..... (6 bidders.)	Oct. 7, 1908.	1 cubic yard, more or less, earth excavation, below grade, at 1c. cubic yard. 5 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard. 120 cubic yards, more or less, rock excavation at 1c. cubic yard. 1 M. feet, board measure, more or less, spruce sheeting at 1c. M. feet. 1 cubic yard, more or less, concrete at 1c. cubic yard. 176 linear feet 10-inch pipe sewer at \$2.75 linear foot. 3 linear feet, more or less, 6-inch pipe chimney at 1c. linear foot. 10 linear feet, more or less, old drain rebuilt at 50c. linear foot. 1 manhole built at \$35. 1 cubic yard, more or less, gravel or sand refill at 1c. cubic yard. 10 linear feet, more or less, 6-inch pipe under-drain at 10c. linear foot. 1 manhole invert rebuilt at \$1.	518 99	900 00

The bids include the furnishing by the contractor of all materials except ironwork.

*The bids of Kennelly & Gaddis (\$1,071) and James P. Collins (\$1,764.50) rejected by superintendent on account of bids being informal. Contract awarded to G. M. Bryne Company, third lowest bidder.

Sewer Contracts Awarded, 1908-09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Poplar street, Metropolitan avenue, Cornell, James and Beech streets and private land, West Roxbury.	Thomas A. Nolan..... (8 bidders.)	Oct. 9, 1908.	80 cubic yards, more or less, earth excavation, below grade, at 73c. cubic yard. 55 cubic yards, more or less, earth excavation, outside trenches, at 39c. cubic yard. 550 cubic yards, more or less, rock excavation at \$4.23 cubic yard. 60 M. feet, board measure, more or less, spruce sheeting at \$15 M. feet. 2 M. feet, board measure, more or less, spruce platforms at \$25 M. feet. 70 cubic yards, more or less, concrete at \$3.80 cubic yard. 738 linear feet, more or less, 15-inch pipe sewer at \$1.98 linear foot. 2,012 linear feet, more or less, 12-inch pipe sewer at 96c. linear foot. 6,751 linear feet, more or less, 10-inch pipe sewer at 64c. linear foot. 700 linear feet, more or less, 6-inch pipe chimney at 8c. linear foot. 30 linear feet, more or less, old drain rebuilt at 98c. linear foot. 44 manholes, more or less, at \$32 each. 2 special manholes, more or less, at \$53 each. 110 linear feet, more or less, old 10-inch pipe sewer removed at 1c. linear foot. 1,000 linear feet 6-inch pipe underdrain at 9c. linear foot. 50 cubic yards, more or less, gravel or sand refill at 1c. cubic yard. 50 linear feet, more or less, 8-inch pipe underdrain at 11c. linear foot. 1 manhole invert rebuilt at \$8. Pipe furnished, 67 per cent discount from list price, Akron or Portland.	Final payment not made.	\$28,570 00
Walley street, between Leyden street and Orient avenue, East Boston.	Kennelly & Gaddis (8 bidders.)	Oct. 15, 1908.	1 cubic yard earth excavation, below grade, at \$1 cubic yard. 10 cubic yards earth excavation, outside trenches, at 75c. cubic yard.	\$1,000 66	1,800 00

Sherwood street, between Norfolk avenue and end of street, Roxbury.	John Guarino..... (5 bidders.)	Oct. 22, 1908.	20 cubic yards rock excavation at \$4.50 cubic yard. 3 M. feet, board measure, spruce sheeting at \$18 M. feet. 3 cubic yards concrete at \$6.50 cubic yard. 550 linear feet 12-inch pipe sewer at \$1.29 linear foot. 30 linear feet 6-inch pipe chimney at 21c. linear foot. 3 manholes built at \$42 each. 10 linear feet old surface or catch-basin drains at 50c. linear foot. 5 cubic yards gravel or sand refill at 25c. cubic yard. 50 linear feet 6-inch pipe underdrain at 10c. linear foot. 1 old lamp hole to be removed and connecting sewer at \$4. Connecting the old with the new sewer, \$4. Connecting new sewer and building brick bulk- head, \$6. 10 linear feet old house drains rebuilt at 50c. linear foot.	665 19	1,720 00
			15 cubic yards earth excavation, below grade, at \$1 linear foot. 5 cubic yards earth excavation, outside trenches, at 75c. cubic yard. 1 cubic yard rock excavation at \$4.50 cubic yard. 1,260 linear feet spruce piles at 5c. linear foot. 20 M. feet, board measure, spruce sheeting at \$18 M. feet. 4 M. feet, board measure, spruce platform at 1c. M. feet. 10 cubic yards Portland cement concrete at \$5 cubic yard. 305 linear feet 12-inch pipe sewer at \$1.50 linear foot. 30 linear feet of old house sewer removed and handling sewage at \$1 linear foot. 10 linear feet of old house drain rebuilt at 50c. linear foot. 1 12-inch slant placed in old sewer or drain at \$2.		

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908=09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Sherwood street, between Norfolk avenue and end of street, Roxbury.	John Guarino..... (5 bidders.)	Oct. 22, 1908.	3 manholes built at \$45 each. 68 cubic yards gravel or sand refill at 25c. cubic yard. 305 linear feet 6-inch pipe underdrain at 15c. linear foot. 12 square yards pavement taken up and relaid at 25c. square yard. 400 cubic yards earth excavation in main trench, price to include the necessary backfilling and removal of surplus material, at 10c. cubic yard.		
Codman street, between Dorchester avenue and Washington street, Dorchester.	John Donley..... (11 bidders.)	Oct. 21, 1908.	5 cubic yards earth excavation, below grade, at \$1 cubic yard. 10 cubic yards earth excavation, outside trenches, at 75c. cubic yard. 50 cubic yards rock excavation at \$3.50 cubic yard. 2 M. feet, board measure, spruce sheeting at \$18 M. feet. 1 M. feet, board measure, spruce platform at \$18 M. feet. 2 cubic yards concrete at \$5 cubic yard. 910 linear feet 12-inch pipe sewer at 98c. linear foot. 120 linear feet 6-inch pipe chimney at 25c. linear foot. 10 linear feet old house drain rebuilt and connected at 15c. each. 10 linear feet old drain rebuilt at 10c. linear foot. 5 manholes built at \$38 each. 5 cubic yards gravel or sand refill at \$1 cubic yard. 910 linear feet 6-inch pipe underdrain at 28c. linear foot. 400 square yards old stone block pavement removed and piled up at 20c. square yard. 1 connection new sewer with old sewer, \$10.	\$1,277 00	\$3,185 00

Wayland street, from Hartford street about 170 feet northwesterly, Dorchester.	T. H. Connolly..... (11 bidders.)	Nov. 2, 1908.	3 cubic yards earth excavation, below grade, at \$1 cubic yard. 3 cubic yards earth excavation, outside trenches, at 75c. cubic yard. 100 cubic yards rock excavation at \$1 cubic yard. 100 feet, board measure, spruce sheeting at \$18 M. feet. 1 cubic yard concrete at \$3.50 cubic yard. 170 linear feet 10-inch pipe sewer at 50c. linear foot. 10 linear feet old house sewer removed and handling of sewage at 25c. linear foot. 6 linear feet old house drain rebuilt at 25c. linear foot. 1 cubic yard brick masonry at \$7 cubic yard. 1 cubic yard gravel or sand refill at 50c. cubic yard. 2 old manholes rebuilt and connected at \$4 each. 60 cubic yards earth excavation in trench, above grade, the price to include all necessary backfilling and the removal of surplus material, at \$3 cubic yard.	475 10	736 00
North Munroe terrace, between Neponset avenue and Train street, Dorchester.	Timothy McCarthy..... (11 bidders.)	Nov. 10, 1908.	2 cubic yards earth excavation, below grade, at \$1 cubic yard. 2 cubic yards earth excavation, outside trenches, at 75c. cubic yard. 5 cubic yards rock excavation at \$4.50 cubic yard. 1 M. feet, board measure, spruce sheeting at \$18 M. feet. 1 M. feet, board measure, spruce platforms at 1c. M. feet. 2 cubic yards Portland cement concrete at \$5 cubic yard. 891 linear feet 12-inch pipe sewer at 87c. linear foot. 100 linear feet old house sewer removed and reconnected, handling sewage, at 75c. linear foot. 20 linear feet house drain rebuilt at 30c. linear foot.	1,092 12 Including extra work amounting to \$125.	2,139 00

The bids include the furnishing by the contractor of all materials except ironwork.

Sewer Contracts Awarded, 1908-09. — Concluded.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
North Munroe terrace, between Neponset avenue and Train street, Dorchester.	Timothy McCarthy (11 bidders.)	Nov. 10, 1908.	1 12-inch by 12-inch Y placed in old pipe sewer at \$2.50. 4 manholes built at \$31 each. 2 cubic yards gravel or sand refill at 1c. cubic yard. 100 linear feet 6-inch pipe underdrain at 1c. linear foot. 1 old manhole rebuilt at \$25. 10 square yards paving taken up and relaid at 50c. square yard.		
South Munroe terrace, between Neponset avenue and Train street, Dorchester.	Timothy McCarthy (11 bidders.)	Nov. 12, 1908.	2 cubic yards earth excavation, below grade, at \$1 cubic yard. 2 cubic yards earth excavation, outside trenches, at 75c. cubic yard. 5 cubic yards rock excavation at \$4.50 cubic yard. 1 M. feet, board measure, spruce sheeting at \$18 M. feet. 1 M. feet, board measure, spruce platforms at 1c. M. feet. 2 cubic yards Portland cement concrete at \$5 cubic yard. 970 linear feet 12-inch pipe sewer at 93c. linear foot. 100 linear feet house sewer removed and reconnected, handling sewage, at 75c. linear foot. 20 linear feet old house drain rebuilt at 30c. linear foot. 4 manholes built at \$31 each. 2 cubic yards gravel or sand refill at 1c. cubic yard. 100 linear feet 6-inch pipe underdrain at 1c. linear foot. 1 old manhole rebuilt at \$25. 10 square yards paving taken up and relaid at 50c. square yard. 1 connection with manhole at \$5.	Final payment not made.	\$2,328 00

Mendum street, between Fairview street and Walter street and outlet in private land and South street, West Roxbury.	William L. Dolan..... (12 bidders.)	Nov. 23, 1908.	5 cubic yards earth excavation, more or less, below grade, at 40c. cubic yard. 10 cubic yards earth excavation, more or less, outside trenches, at 75c. cubic yard. 100 cubic yards rock excavation, more or less, at \$1 cubic yard. 5 M. feet, board measure, spruce sheeting at \$15 M. feet. 5 cubic yards, more or less, concrete at \$4 cubic yard. 434 linear feet 12-inch pipe sewer at \$1.10 linear foot. 1,372 linear feet 10-inch pipe sewer at 98c. linear foot. 80 linear feet 24-inch double-thick pipe surface drain at \$1.50 linear foot.. 1,017 linear feet 12-inch pipe surface drain at 84c. linear foot. 518 linear feet 10-inch pipe surface drain at 78c. linear foot. 30 linear feet 6-inch pipe chimneys at 20c. linear foot. 20 linear feet old house drain rebuilt at 40c. linear foot. 10 linear feet old drain rebuilt, other than house drain, at 40c. linear foot. 1 or more 12-inch Y's placed in old pipe drain at \$3. 9 manholes built on house sewer at \$33 each. 9 manholes built on surface drain at \$33 each. 1 special manhole built on house sewer at \$50. 5 cubic yards gravel or sand refill at \$1 cubic yard. 50 linear feet 6-inch pipe underdrain at 25c. linear foot. 1 special inlet built in old manhole at \$20. For deepening old brook in private land for average depth of 1.5 feet and distance of 100 feet, more or less, at 40c. per linear foot.	Final payment not made.	6,745 00
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The bids include the furnishing by the contractor of all materials except ironwork.

Pile-driving Contracts Awarded During 1908.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.	Engineer's Preliminary Estimate.
Putnam and Glendon streets, interceptor Section 2, sewer in private land between outlet and Glendon street, East Boston.	Rendle and Stoddard..... (8 bidders.)	June 29, 1908.	Furnishing and driving 200 spruce piles, 15 to 20 feet long, at $14\frac{1}{2}$ c. linear foot. Furnishing and driving 10 spruce piles, 20 to 30 feet long, at $14\frac{1}{2}$ c. linear foot.	\$354 40	\$471 25
A street sewer, between West First street and Mt. Washington avenue extension, South Boston.	W. A. Norton Company..... (5 bidders.)	Aug. 4, 1908.	Furnishing and driving 624 spruce piles, average length not over 15 feet long, at $11\frac{1}{2}$ c. linear foot. Furnishing and driving 210 spruce piles, from 20 to 30 feet long, at $11\frac{1}{2}$ c. linear foot. Furnishing and driving 10 spruce piles, from 30 to 40 feet long, at $11\frac{1}{2}$ c. linear foot. Furnishing and driving 5 spruce piles, over 40 feet long, at $11\frac{1}{2}$ c. linear foot.	Final payment not made.	1,743 98
Avenue Louis Pasteur, southeasterly side, between Board of Survey stations 219 and 220, Roxbury.	John T. Scully Foundation and Transportation Company.	Jan. 19, 1909.	Furnishing and driving 230 spruce piles less than 25 feet long, with an average length of 18 feet, equals 4,140 linear feet at 11 cents per foot.	Nothing paid.	828 00

Contracts for Cleaning Catch-basins Awarded During 1908.

CONTRACT.	Awarded to	Dated.	Estimated Number Basins.	Estimated Number Cu. Yds.	Price per Cu. Yd.	Amount Paid to Contractor.
City Proper, Districts 9 and 10.....	Mark H. Lynch.....	June 4, 1908.	1,000	2,000	\$1 25	\$3,951 39
Roxbury and City Proper, Districts 7 and 8.....	M. Doyle & Co.....	June 22, 1908.	2,000	5,000	1 00	4,818 70
South Boston, District 1.....	M. F. Gaddis.....	June 30, 1908.	700	1,400	1 49	3,248 20
East Boston, District 2.....	James H. Ferguson.....	June 30, 1908.	400	800	1 68	1,930 19
Charlestown, District 3.....	James F. Nyhan.....	June 30, 1908.	200	400	1 33	749 85
Brighton and West Roxbury, Districts 4 and 5.....	Mark H. Lynch.....	June 30, 1908.	300* 600†	600* 1,800†	1 25	1,143 51 2,387 88
Dorchester, District 6.....	James F. Murphy.....	June 30, 1908.	800	2,400	1 20	3,063 48

* Brighton.

† West Roxbury.

Contracts for Cleaning Sewers Awarded During 1908.

CONTRACT.	Awarded to	Dated.	Price per Linear Foot.	Amount Paid to Contractor.
Marginal street, between Jeffries street and Boston, Revere Beach & Lynn Railroad.....	Richard A. Nagle.....	March 30, 1908.	35 cents per linear foot.....	\$255 50

Contracts for Repaving and Regulating Awarded During 1908.

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Amount Paid to Contractor.
Congress street, between Milk and Franklin streets, City Proper.	John E. Burns & Co.....	July 9, 1908.	About 290 square yards of granite block paving to be relaid, including concrete base, with pitch joints, at \$2.50 square yard. About 10 square yards of existing flagging crosswalks to be relaid, including concrete base, with pitch joints, at \$2.50 square yard.	\$945 00
Broad street, between Custom House street and India square, City Proper.	Daniel E. Lynch.....	Nov. 3, 1908.	About 300 square yards of granite block paving to be taken up and relaid, including concrete base, with pitch joints, at \$1.90 square yard. About 25 square yards of existing crosswalks to be taken up and relaid, including concrete base, with pitch joints, at \$1.40 square yard.	Final payment not made.

Contracts for Material Awarded During 1908.

MATERIAL.	Awarded to	Dated.	Price per Barrel in Paper Bags.
3,213 barrels Portland cement, more or less, to be delivered at Stony brook channel	J. P. O'Connell & Co.....	March 27, 1908.	\$1 45
Coal from January 1, 1909, to April 1, 1909.....	Batchelder Bros.....	Jan. 1, 1909.	Price per Ton.
			Broken.
			Soft.
			\$5 50 \$6 10 \$6 10 \$4 25

The above contracts were made by the Supply Department.

Miscellaneous Contracts Awarded, 1908-09.

CONTRACT.	Awarded to	Dated.	Number Feet of Centers.	Size.	Shape.	Rental.
Rental for collapsible steel centers for period of nine months.	Blaw Collapsible Steel Centering Company..	Sept. 1, 1908.	50 feet 50 feet	42 inches 24 inches	Half round	\$80 00 60 00
Rental for collapsible steel centers for period of nine months.	Blaw Collapsible Steel Centering Company..	Sept. 1, 1908.	20 feet	96 inches	Half round	175 00
Locks for flushing gates for old Stony brook channel.	Gibby Foundry Company.....	Jan. 29, 1909.	.....	.....	.....	\$155 00

Miscellaneous Contracts Awarded, 1908-09.—Continued.

CONTRACT.	Awarded to	Dated.	Amount to be Paid.
Keeping the east shaft at Moon Island, Squantum, free from grease for a term of five years from August 5, 1908, and for a further period if the contractor shall so elect by a notice to the superintendent before the termination of the first five years, for the sum of \$75 per month.	Walter J. Tavender.....	Aug. 4, 1908.	\$75 per mo.
Improved plastic slate roofing on garage, Childs street.....	Improved Plastic Slate Roofing Company.....	July 6, 1908.	\$50 00
Removing stable and shed from the land of Alice F. Cahill and settlement of claim for damages for taking of said land for the improvement of Stony brook channel.	Alice F. Cahill.....	Oct. 10, 1908.	600 00
For the removal of stable of Lawrence Norton and settlement of claim for damages for taking of said land for the improvement of Stony brook channel.	Lawrence Norton.....	Nov. 24, 1908.	75 00
Automobile insurance from September 10, 1908, to September 10, 1909.....	Federal Insurance Company.....	Sept. 11, 1908.	* 162 00 † 52 50
Hot water heater for garage, Childs street.....	J. F. Houghton & Son.....	Nov. 11, 1908.	165 00
Agreement relative to the building of Stony brook channel, between Linden Park, Vernon and Lamont streets, as to rights in bed or channel of said brook; and settlement of suit for damages, already instituted, occasioned by flooding the premises of A. J. Tower Company on or about December 9, 1907, during construction of conduit below their premises.	A. J. Tower Company.....	Sept. 21, 1908.	4,000 00
Compensation for right to erect derricks on the premises of A. J. Tower Company, and to have access across the same during the construction of said works.	.....	.....	500 00

* Accident policy premium.

† Fire and damage policy.

Miscellaneous Contracts Awarded, 1908=09. — *Continued.*

CONTRACT.	Awarded to	Dated.	Amount Paid per Item.	Final pay- ment not made.
Repairs on pumping engines Nos. 3 and 4, pumping station, Calf Pasture.	Lockwood Manufacturing Com- pany.	July 31, 1908.	Item 1. Lump sum of \$23,750. Extra work at the following rates under Item 2. Materials: Composition metal, 37c. pound. Machine steel, 4½c. pound. Wrought iron, 4½c. pound. Steel forgings, 6 to 18c. pound. Cast iron, 4½c. pound. Tobin bronze, 30c. pound. Brass tubing (American Tube Works), seamless drawn, 27c. pound. Item 2. Labor: Machinists at pumping station or shop, per day, per man, \$4.50. Patternmakers at pumping station or shop, per day, per man, \$5. Carpenters at pumping station or shop, per day, per man, \$4. Riggers at pumping station, per day, per man, \$4. Steamfitter and helper at pumping station or shop, per day, per man, \$8. Foreman at pumping station, per day, \$6. Machinist in shop with small tools, per day, \$5. Machinist in shop with large tools, per day, \$7. Boilermaker in shop with small tools, per day, \$4.50. Blacksmith with one helper and forge, per day, \$9. Blacksmith with one helper and steam hammer, per day, \$12. Blacksmith with two helpers and steam hammer, per day, \$15.	

Miscellaneous Contracts Awarded, 1908=09.—Concluded.

CONTRACT.	Awarded to	Dated.	Price.
Making change in existing condenser piping layout at the pumping station, Calf Pasture.	The Lumsden and Van Stone Company.....	May 20, 1908.	\$170 00
Building two flushing pontoons for deposit sewer at the pumping station, Calf Pasture.	Richard F. Keough.....	May 20, 1908.	968 00
Remodeling ten operating stands at the pumping station, Calf Pasture.....	Coffin Valve Company.....	May 6, 1908.	3,710 00
Calking sludge scow, pumping station, Calf Pasture.....	C. A. Borden & Son.....	Sept. 8, 1908.	100 00
Repairing roofs of buildings at the pumping station, Calf Pasture.....	William Martin.....	Oct. 29, 1908.	150 00
Forty bucket and forty delivery valves at the pumping station, Calf Pasture,*	Gibby Foundry Company.....	Sept. 28, 1908.	480 00
Furnishing two lathes at the pumping station, Calf Pasture *.....	Prentiss Tool and Supply Company.....	Oct. 5, 1908.	2,836 00
Furnishing and installing two 7-inch expansion bends, pumping station, Calf Pasture.	Lumsden and Van Stone Company.....	July 31, 1908.	147 00

* Contracts made by the Supply Department.

**Schedule of Sewers Built to Date in the City of Boston,
February 1, 1909.**

DISTRICT.	Length of Common Sewers Built During the Year End- ing January 31, 1909.	Length of Metropolitan Intercepting Sewers Built During the Year Ending January 31, 1909.	Length of Common Sewers Re- built or Abandoned During the Year Ending January 31, 1909.]	Additional Length of Common Sewers for the Year Ending January 31, 1909.		
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>
City Proper.....	1,580.86	.....	.....	1,212.31	368.55	0.07
East Boston.....	2,834.41	2,280.14	0.43	24.50	2,809.91	0.53
Charlestown.....	309.78	.....	.....	.....	309.78	0.06
South Boston.....	3,289.18	.....	.....	1,094.00	2,195.18	0.42
Roxbury.....	11,670.72	.....	.....	2,465.69	9,205.03	1.74
West Roxbury....	20,895.21	.....	.....	505.39	20,389.82	3.86
Dorchester.....	10,436.36	2,422.11	0.46	151.00	10,285.36	1.95
Brighton.....	5,829.31	.....	.....	100.00	5,729.31	1.09
Totals.....	56,845.83	4,702.25	0.89	5,552.89	51,292.94	9.72
Total length built previous to January 31, 1908.....			5.92	.....	.....	705.14
Totals.....			6.81	.....	.....	714.86

Length of common sewers.....	714.86
Length of metropolitan intercepting sewers.....	6.81
Length of intercepting sewers.....	24.12
Total.....	<u>745.79</u>
Total mileage of streets containing sewerage works	<u>475.23</u>

**Summary of Sewer Construction for the Year Ending
January 31, 1909.**

DISTRICT.	Built by the City by Contract or Day Labor.	Built by Private Parties.	Total Length Built.
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>
City Proper.....	1,234.33	346.53	1,580.86
East Boston.....	5,114.55	.....	5,114.55
Charlestown.....	309.78	.....	309.78
South Boston.....	3,090.53	198.65	3,289.18
Roxbury.....	11,670.72	.....	11,670.72
West Roxbury.....	18,468.98	2,426.23	20,895.21
Dorchester.....	9,859.22	2,999.25	12,858.47
Brighton.....	4,055.67	1,773.64	5,829.31
Totals.....	53,803.78	7,744.30	61,548.08

**Summary of Sewer Construction for Five Years Previous to
February 1, 1909.**

	1904.	1905.	1906.	1907.	1908.
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>
Built by the city by contract or day labor.....	157,077.28	160,715.87	103,823.72	79,340.46	53,803.78
Built by private parties	6,758.47	17,919.17	9,641.49	11,590.87	7,744.30
Totals.....	163,835.75	178,635.04	113,465.21	90,931.33	61,548.08

ENTRANCE FEES, PERMITS AND ASSESSMENTS.

Entrance fees to the amount of \$4,135.16 have been collected from estates upon which no sewer assessment was ever paid, in accordance with the Ordinances of 1908, chapter 3, section 11.

Bills for sewer assessments amounting to \$1,214.28 have been deposited for collection, representing those estates assessed under chapter 456 of the Acts of 1889, and amendments thereto, which have been connected during the year with the sewers for which they were assessed.

Permits covering 363 connections have been issued to district foremen and fifty-eight to contractors; licensed drainlayers have received permits to lay or repair 1,856 house drains. The work done under these permits has been inspected and a record of the same made on the plans of this division, in accordance with the provisions of the Ordinances of 1908, chapter 3.

Plans for the assessments of estates for sewer construction have been furnished the Street Commissioners, representing 36,667.80 feet of sewers and appurtenances, costing \$406,887.69.

**Amount of Sludge Received and Removed from Deposit Sewers
from February 1, 1908, to January 31, 1909, Inclusive.**

MONTH.	Cu. Yds. Received.	Cu. Yds. Removed.	
1908.			
February	340	425	Sludge in sewers February 1, 1908, 1,180 cubic yards.
March	325	340	
April	356	340	
May	549	255	
June	358	425	
July	572	425	
August	701	340	
September	332	170	
October	490	425	
November	322	340	
December	345	340	
1909.			
January	343	425	Sludge in sewers February 1, 1909, 1,963 cubic yards.
	5,033	4,250	

**Amount of Refuse Removed from Filth-hoist from February 1,
1908, to January 31, 1909, Inclusive.**

MONTH.	POUNDS.
1908.	
February	95,700
March	111,900
April	111,000
May	103,800
June	96,000
July	98,400
August	88,800
September	118,500
October	90,600
November	103,200
December	99,300
1909.	
January	93,000
	1,210,200 = 605 tons 200 pounds.

Number of gates, regulators, sumps and overflows to be cleaned and cared for. These are under constant inspection and are cleaned after every storm or heavy rise of sewage due to other causes:

DISTRICT.	Gates.	Regulators.	Sumps.	Overflows.
Brighton.....	42	15	17	23
Charlestown.....	24	9	11	12
East Boston.....	47	18	19	20
City Proper.....	84	15	41	41
Dorchester.....	62	3	11	19
South Boston.....	49	4	22	21
Roxbury.....	44	2	11	25

Number of penstock and flushing gates.....	19
Regulators repaired.....	46
Tide gates repaired.....	208
Manholes repaired.....	54
Manhole steps put in.....	362
Tide gates cleaned.....	6,450
Regulators cleaned.....	2,520
Overflows cleaned.....	292
Sumps cleaned.....	3,050
Penstock and flushing gates cleaned, oiled and repaired.....	40

Average Daily Amount of Sewage Received at Moon Island Reservoir.

	Gallons.
1906	80,241,046
1907	87,661,058
1908	83,376,502

Real Estate in Charge of the Sewer Division.

	ASSESSED VALUATION.	
	Land.	Buildings.
OWNED BY CITY.		
Sewer yard, 678 Albany street, South End.....	\$56,400	\$3,000
Sewer yard, Massachusetts avenue, near Albany street, South End.....	7,900	1,100
Sewer yard, Western avenue, Brighton.....	9,200	5,500
Pumping station, Old Harbor Point, Dorchester.....	138,000	700,000
Land, buildings and reservoirs at Moon Island and Squantum.....		
Sewer yard, North Grove street, West End. (Occu- pied in common with Sanitary and Street Clean- ing Divisions.).....	90,300	28,700
Sewer yard, Child and South streets, West Roxbury. (Occupied in common with Street Department.)..	19,300	3,000
Pumping station, Lyons street.....	1,200	
Gatehouse, Back Bay Fens.....		
LEASED.		
Sewer yard, Revere street, West End. (Part of rental paid by this division. Leased J. J. Costello estate from J. Costello.).....	74,400	900
Sewer yard, East Eagle street, East Boston. (Part of rental paid by this division. Leased from trustees of Glendon Company.).....		
Sewer yard, Old Harbor street and Columbia road, South Boston.. (Office building owned by Sewer Division. Leased from estate of Choate Burn- ham.).....	5,200	3,200
Sewer yard, Gibson street, Dorchester. (Buildings erected by Sewer Division. Leased from trustees of Gibson School Fund.).....	7,000	5,000

APPENDIX G.

REPORT OF THE DEPUTY SUPERINTENDENT OF
STREET CLEANING AND WATERING DIVISION.

BOSTON, MASS., February 1, 1909.

MR. GUY C. EMERSON,

Superintendent of Streets:

DEAR SIR,—I respectfully submit the following report of the expenditures of the Street Cleaning and Watering Division for the financial year ending January 31, 1909.

Respectfully submitted,

C. B. PRATT,
Deputy Superintendent.

The work of the Street Cleaning and Watering Division consists in the machine sweeping and hand sweeping of all streets within certain district lines, and the watering of all streets throughout the city under Ordinance of 1908, chapter 3, section 1.

The district lines of the division comprise the entire city excepting part of Dorchester, Jamaica Plain, Brighton and West Roxbury:

- District 1, South Boston.
- District 2, East Boston.
- District 3, Charlestown.
- District 6, part of Dorchester under charge of District 1.
- District 7, Roxbury.
- District 8, South End, uptown.
- District 8, South End, downtown.
- District 9, Back Bay.
- District 10, West End.
- District 11, Patrol System.

The work of the street cleaning branch has been of the same general character as in past years. During the last few

months of the year a new type of flushing machine was used known as the Kindling Street Washing Machine. This machine consists of a steel tank of about 400 gallons capacity, mounted on four wheels. The tank feeds four sprinklers between the front and rear wheels, all operated with valves by the driver. Geared to the left hind wheel is a cleaning roller or squeegee. This is a heavy steel cylinder with twenty-four rubber fins. As the cylinder revolves the rubbers remove the dust, mud and slime from the pavement.

During the season a contract was made with the Calcede Process Company to treat about 268,000 square yards of macadam roadway with calcium chloride for laying dust. The price paid for five months was four cents (\$0.04) per square yard. The material is brought to the roadway in carts of about 600 gallons capacity, filled with a concentrated solution of 40 per cent calcium chloride, specific gravity 1.4. A nest of five 110-gallon galvanized-iron cans is carried on a rack on the rear of the cart. The cart is driven to a standpipe on the roadway where a can is placed and filled with the solution. The remaining cans are left at other standpipes and filled. By means of a siphon arrangement the cart is filled with water from the standpipe and with the 110 gallons of the 40 per cent solution by one operation. The empty can is placed on the rack and the operation is repeated. One load, or about 600 gallons, covers about 1,900 square yards of roadway, or about ten loads to the mile of 32-foot roadway. In order to fill the surface thoroughly with the chloride two applications are made the first week. The following applications serve on an average twenty-one days. In shady areas the salt retains the moisture for a longer period than in areas exposed to the direct rays of the sun. It is usually necessary to feed the salt by the ordinary application of water, varying from one to three times per week, according to the condition of the weather and the road treated. The calcium chloride treatment by this method gives very satisfactory results. It leaves no odor, it is clean and, though not a road builder, it leaves the surface of the road in much better condition at the end of the season's treatment.

About twenty-five miles of roadway were also treated with an oil emulsion, mechanically prepared by the use of a soap solution to emulsify a residuum asphaltic base oil of twenty-five to thirty-five per cent asphalt. The emulsion is prepared as follows: The soap solution, consisting of twenty-five pounds of cotton seed oil soap to fifty gallons of steam-heated water, is prepared. This solution is mixed with 100 gallons of crude oil. Three hundred gallons of this mixture is

agitated about twenty minutes in a 600-gallon water cart until the emulsion is complete. An ordinary watering cart of 600 gallons capacity is filled with this preparation and driven to the roadway. One hundred gallons of the emulsion is drawn into a cart, filled with water from the standpipe and spread. Two applications are applied during the first four days. The following applications serve from eight to twenty-one days according to the weather conditions, locations and surface conditions of the road.

This treatment gives very satisfactory results. The roads are dustless, they become coated with a smooth, hard surface which is not washed into the gutters, thus adding life to the wearing surface of the roadway. There is the disadvantage of a slight odor and a wet, oily surface for three or four hours until complete penetration. These conditions are more than offset, however, by the results gained in laying the dust and in the protection and prolongation of the life of the roadway.

FINANCIAL STATEMENT, 1908-1909.

Amount of appropriation	\$570,000 00
Transferred from Sanitary Division	3,905 31
Received from Boston Elevated Railway Company for tickets	50 50
Received by sale of automobile to Sewer Division	300 00
Total amount of appropriation	\$574,255 81
Expenditures of Street Cleaning Division	\$419,575 91
Expenditures of Street Watering Division	154,679 90
	<u>574,255 81</u>

ITEMS OF EXPENDITURE FOR THE YEAR.

Salary of deputy and office pay rolls,	\$6,555 22
Stationery, printing, postage and office incidentals	811 94
Board of horses	438 42
Maintenance of automobile	186 16
Advertising	103 46
<i>Carried forward</i>	\$8,095 20

<i>Brought forward</i>	\$8,095 20
Telephone service	534 81
Foremen and sub-foremen on street work, snow and patrolling . .	33,085 66
Labor, paved streets, gutters and patrolling	132,100 88
Maintenance of dumps	6,142 98
Hired teams, paved streets, gutters and patrolling	27,687 72
Labor on snow work	29,923 75
Hired teams on snow work . . .	5,998 64
Sanding streets	411 35
Flushing streets	341 85
Cleaning public alleys	321 48
Work performed for Sewer Division on catch-basins	720 10
Work performed for Sanitary Division on ashes	1,569 25
Stable and yard labor, rent, fuel and light	30,326 76
Hay, straw and grain	23,246 73
Yard and stable repairs and furnishings	922 92
Cart and carriage repairs and furnishings	3,435 71
Harness repairs	1,440 68
Sweeping machine repairs . . .	1,591 77
Tool repairs	149 37
Horseshoeing	4,794 50
Veterinary services and medicine .	1,659 40
Traveling expenses	129 20
Broom stock purchased	1,392 27
Refilling machine brooms . . .	3,174 00
Harnesses and horse furnishings purchased	647 35
Tools purchased	658 17
Street washing machine purchased, Holidays, allowed time, medical attendance	1,291 00
Scow (cost of disposal at sea of 37,006 loads of street dirt) . .	10,360 33
Annuity (see chapter 569, Acts of 1898)	9,303 55
	300 00

Patrol System.

Foremen, inspectors, labor and teaming on push carts . . .	66,670 54
Labor and teaming, paper patrol .	2,406 30

Carried forward \$410,834 22

<i>Brought forward</i>	\$410,834 22	
Yard and office repairs and furnish- ings	454 45	
Cart and barrel repairs	1,901 77	
Yard and dump labor, rent, fuel and light	3,075 82	
Holidays, allowed time and medical attendance	2,613 09	
Horse furnishings and harness re- pairs	16 51	
Shoeing	104 75	
Sand	575 30	
		\$419,575 91

Bills Deposited with City Collector.

For cleaning farmers' market	\$845 25	
For damages done to division carts, For removing gravel left by con- tractors in streets	8 75	
	67 50	
		\$921 50

Expenditures of the Street Watering Division.

Superintendence	\$839 67	
Office pay rolls	1,299 09	
Telephone	190 38	
Printing	117 13	
Stationery	21 32	
Board of horses	104 57	
Horseshoeing	14 00	
Veterinary services and medicine	4 00	
Tools	2 99	
Cart and bicycle repairs	361 12	
Harness repairs	2 76	
Horse furnishings	2 25	
Standpipes, maintenance and repairs	2,531 50	
Sundries	6 75	
Teaming	120,017 19	
Labor, water cart chasers	9,218 13	
Installation of oil plants	1,261 14	
Maintenance of oil plants	7,695 39	
Repairs on oil plant	64 24	
Calcide process	10,926 28	
Total	\$154,679 90	

**Distribution of Force February 1, 1909, Street Cleaning
and Watering Division.**

Office Force.

1 deputy superintendent at	\$3,000 00	per year.
1 chief clerk at	1,300 00	" "
2 clerks at	1,200 00	" "
1 clerk (draughtsman) at	3 00	" day (from Dec. 16)
1 driver at	2 50	" "
6		

Street Watering Force.

1 inspector at	\$1,400 00	per year.
1 steam engineer at	3 25	per day.
2 laborers at	2 25	" "
4		

Table Showing Amount Expended by Districts, Including Superintendence, Labor and Hired Teams, for Cleaning Paved Streets, Gutters, etc.

DISTRICTS.	Paved Streets.	Cleaning Gutters.	Team Patrolling.	Superin- tending Labor.	STABLE AND YARD.	Repairs.
					Hay, Straw, Grain.	
1.....	\$16,467 74	\$2,797 10	\$1,432 47	\$5,469 61	\$2,715 88	\$304 48
2.....	6,161 25	5,846 29	374 38	4,947 09	2,061 41	80 94
3.....	12,753 27	3,194 53	595 12	2,585 61	2,166 30	126 13
6.....	5,806 78	3,770 50	1 13	.....	.....	.....
7.....	15,114 60	3,207 62	716 21	1,962 43	2,266 76	6 90
8 { Uptown.....	12,974 20	3,674 87	86 59	7,703 91	7,528 13	83 98
	41,521 16		330 13			
9.....	4,083 10	7,815 58	75 06	8,161 71	6,508 25	47 95
10 { West End....	17,102 61	.....	166 59			
	17,633 22	.....	113 96			
Totals.....	\$149,617 93	\$30,306 49	\$3,891 64	\$30,830 36	\$23,246 73	\$650 38

Miles and Areas of Streets Cared for.

DISTRICT No.	Location.	MILES OF STREETS CARED FOR.		SQUARE YARDS CARED FOR.		Total Square Yards.
		Paved.	Macadam.	Paved Streets.	Two Gutters, each 4' 6" Wide.	
1.....	South Boston.....	20.19	17.82	424,000	94,090	518,090
2.....	East Boston.....	7.21	19.23	154,000	101,535	255,535
3.....	Charlestown.....	12.91	11.60	293,000	61,250	354,250
6.....	Dorchester, part.....	5.29	24.32	109,000	128,410	237,410
7.....	Roxbury.....	17.32	9.29	383,000	49,050	432,050
8.....	South End, uptown.....	11.16	12.01	225,000	63,415	288,415
8.....	South End, downtown.....	28.20	1.22	570,000	6,440	576,440
9.....	Back Bay.....	12.46	18.00	252,000	95,040	347,040
10.....	North End.....	9.35	.94	189,000	4,965	193,965
10.....	West End.....	11.48	.....	232,000	.....	232,000
Totals....	.....	135.57	114.43	2,831,000	604,195	3,435,195

Summary.

	STREET CLEANING.		STREET WATERING.	
	1907-08.	1908-09.	1907-08.	1908-09.
Labor.....	\$358,111 80	\$312,614 94	\$18,839 24	\$13,989 09
Teaming.....	61,333 25	40,808 39	127,801 50	120,550 70
Division bills.....	31,342 37	29,828 88	3,832 20	2,608 50
Sundry bills.....	50,901 25	36,323 70	1,762 51	586 79
Sundry bills, oil and calcium chloride.....				16,944 82
Totals.....	\$501,688 67	\$419,575 91	\$152,235 45	\$154,679 90

Property Occupied by the Street Cleaning and Watering Division.

- South Boston.— Lease of stable No. 162 West Second street.
- East Boston.— Part of stable on East Eagle street (leased by Paving Division).
- Charlestown.— Part of stable on Rutherford avenue, city stable (in charge of Sanitary Division).
- Charlestown.— Office building, Rutherford avenue, city stable.
- Roxbury.— Part of stable on Highland street, city stable (in charge of Sanitary Division).
- South End.— Part of stable No. 650 Albany street, city stable (in charge of Sanitary Division).
- West End.— Part of stable on North Grove street, city stable (in charge of Sanitary Division).
- Back Bay.— Lease of building at No. 95 Columbus avenue.

Amount of Hay, Straw, Oats and Shorts Used by the Street Cleaning and Watering Division for the Year 1908.

Hay	860,639 lbs.
Straw	78,191 “
Shorts	22,000 “
Oats	14,980 bushels.
Highest price paid for hay	\$22.00 per ton.
Lowest price paid for hay	14.00 “
Highest price paid for straw	19.75 “
Lowest price paid for straw	14.50 “
Highest price paid for shorts	30.50 “
Lowest price paid for shorts	27.00 “
Highest price paid for oats	.68 per bu.
Lowest price paid for oats	.54 “

Snow Work for all Districts.

Crossing and Gutter Work and Snow Removal.

Labor and Superintending Crossings and Gutters.	Snow Removal, Superintending Labor and Teaming.	Loads of Snow Removed.	Cubic Yds. of Snow Removed.	Cost per Load Removed.	Cost per Cubic Yd. Removed.
\$7,865 12	\$33,711 69	33,387 * 368	58,021	\$0 998	\$0 581

Capacity of teams, February, 1908, to July, 1908, 42 cubic feet.
Capacity of teams, July, 1908, to January 28, 1909, 54 cubic feet.

* Double loads.

Distribution of Horses and Rolling Stock.

ITEMS.	1.	2.	3.	7.	South Stable.	West Stable.	Total.
Cart horses	15	9	8	5	38	31	106
Driving horses	2	1	1	*3	5	1	13
Single carts	18	8	10	9	65	24	134
Watering carts	2	1	1	1	5	2	12
Single machines . . . . .	.....	.....	1	.....	8	.....	9
Double machines	4	2	2	4	20	7	39
Road machines . . . . .	.....	.....	.....	.....	4	.....	4
Express wagons	1	1	1	1	1	.....	5
Concord . . . . .	.....	.....	.....	.....	1	.....	1
Snow plows	1	1	1	.....	2	1	6
Buggies	1	2	1	*3	6	1	14

* Includes two of the deputy superintendent.

Push=cart Patrol, by Districts.

DISTRICTS.	Superintend- ing Labor and Hired Teams.	Barrel Loads Removed.	Cubic Yards Removed.	Cost per Cubic Yard.	Cost per Barrel.
1.	\$2,713 46	7,044	913	\$2 97	\$0 385
2.	548 52	1,276	165	3 32	430
3.	1,874 40	3,063	397	4 72	612
7.	4,873 59	11,957	1,550	3 14	407
8. Downtown	43 04	.....	.....	.....	.....
10. Paving (Patrol)..	7,050 81	12,163	1,651	4 27	579
11.	48,988 23	87,857	11,389	4 30	557
Totals	\$66,092 05	123,360	16,065	* \$4 11	* \$0 536

Capacity of barrels 3½ cubic feet.
Waste barrels emptied 15,749
Subway barrels emptied 2,706
Total 18,455

* Average.

Superintending Labor and Hired Teams.	Cart, and Barrel Repairs.	Yard and Plant Repairs and Furnishing.	Horse Furnishings and Shoeing.	Sand.	Holidays, Allowed Time, etc.	Rent, Fuel, Light, Yard Labor.	Total Cost.	Cost per Barrel.	Cost per Cubic Yard.
\$66,092 05	\$1,901 77	\$1,032 94	\$121 26	\$575 30	\$2,613 09	\$3,075 82	\$75,412 23	\$0 611	\$4 69

Cost of Maintaining Horses.
Cost per Horse on a Basis of 365 Days per Year.

DISTRICTS.	SOUTH BOSTON.		EAST BOSTON.		CHARLESTOWN.		ROXBURY.		SOUTH STABLE.		WEST STABLE.		TOTAL.
AVERAGE NUMBER OF HORSES KEPT.	17.4		10.4		10.5		10.1		43		32.3		123.7
ITEMS.	Total Cost per Year.	Cost per Day per Horse.	Total Cost per Year.	Cost per Day per Horse.	Total Cost per Year.	Cost per Day per Horse.	Total Cost per Year.	Cost per Day per Horse.	Total Cost per Year.	Cost per Day per Horse.	Total Cost per Year.	Cost per Day per Horse.	Average.
Superintendence...	\$181 52	\$0 029	\$367 27	\$0 097	\$155 89	\$0 041	\$97 79	\$0 027	\$731 41	\$0 046	\$773 75	\$0 065	\$0 051
Labor.....	3,968 67	624	2,446 98	644	2,281 10	592	1,759 82	477	6,972 50	444	7,143 07	606	544
Hay and grain.....	2,715 88	427	2,061 41	543	2,166 30	565	2,266 76	515	7,528 13	479	6,508 25	552	514
Fuel, light and rent,	1,320 02	208	1,065 76	280	105 67	027	104 82	028	307 72	019	236 04	020	069
Shoeing.....	698 75	110	445 75	117	363 75	095	386 00	104	1,602 00	102	1,360 50	115	108
Stable repairs.....	304 48	048	80 94	021	126 13	033	6 90	002	83 98	005	47 95	004	014
Veterinary services and medicine....	215 13	034	117 38	031	118 00	031	122 34	033	779 90	049	302 15	025	036
Totals.....	\$9,404 45	\$1 480	\$6,585 49	\$1 733	\$5,316 84	\$1 384	\$4,744 43	\$1 186	\$18,005 64	\$1 144	\$16,371 71	\$1 387	\$1 336

The stable in South Boston is leased, and all expenditures are made directly by this division.
In East Boston the division occupies the stable as a tenant of the Paving Division, paying its share, per horse, of all expenses.
In Charlestown and Roxbury the division occupies the stables as a tenant of the Sanitary Division, paying a fixed rate per horse, per day, for feed, fuel, light and help.
In the South and West stables the division furnishes feed and help, but pays a fixed rate per day, per horse, for light and fuel.

STREET WATERING.

Table Showing Cost of Teaming and Labor; Miles Cared for by Districts.

DISTRICTS.	Number of Carts.	Cost of Teaming per Year.	Cost of Labor per Year.	Total Cost.	Miles Cared For.	Cost per Mile.	Average Thousand Square Yards per Mile.	Square Yards Cared For.	Cost per Square Yard per Year.
1. South Boston.....	15	\$9,331 13	\$571 50	\$9,902 63	30	\$330 08	21.0	630,000	\$0 0157
2. East Boston.....	11	7,145 00	573 75	7,718 75	25	308 75	21.3	532,500	0144
3. Charlestown.....	8	4,751 63	540 00	5,291 63	16	330 71	22.7	363,200	0145
4. Brighton.....	16	10,173 00	603 00	10,776 00	31	347 61	20.5	635,500	0169
5. West Roxbury.....	26	17,328 00	1,116 00	18,444 00	60	307 40	20.2	1,212,000	0152
6. Dorchester.....	35	22,937 00	2,066 50	25,003 50	83	301 24	20.6	1,709,800	0146
7. Roxbury.....	33	21,512 27	1,100 25	22,612 52	72	314 06	22.1	1,591,200	0142
8. South End.....	16	10,063 50	1,053 00	11,116 50	22	505 29	20.2	444,400	0250
9. Back Bay.....	12	6,454 75	550 13	7,004 88	16	437 80	20.2	323,200	0216
10. City Proper.....	18	10,320 91	1,044 00	11,364 91	25	454 59	20.2	505,000	0225
Totals.....	190	\$120,017 19	\$9,218 13	\$129,235 32	380	\$3,637 53	.....	7,946,800	\$0 1746
Average.....	.....	.....	.....	.....	.....	363 75	20.9	.....	0175

NOTE.—Cost of teaming includes Street Cleaning work performed for Street Watering, \$216.69; office and Deputy Superintendent's salary not included in labor cost.

Days Out, Cart=Days Worked, Number of Carts Out, Cost of Teaming and Labor, by Months.

MONTHS.	Days Out.	Cart-days Worked.	Average Cart-days Worked.	Number of Carts Out.	Average Carts Out.	Cost of Teaming.	Average Cost per Cart.	Cost of Labor.	Total Cost, Labor and Teaming.	Average Cost per Cart, Labor and Teaming.
March.....	3	13.5	4.5	23	7.0	\$161 42	.....	\$1,104 75	.....	.....
April.....	22	1,049.0	48.0	1,324	60.0	6,272 75	\$104 55	1,385 75	\$7,658 50	\$127 64
May.....	22	2,644.5	120.0	2,893	132.0	15,888 25	120 37	1,078 00	16,966 25	128 61
June.....	26	4,420.5	170.0	4,717	181.0	26,660 00	147 29	1,079 13	27,739 13	153 25
July.....	25	3,806.5	152.0	4,354	174.0	23,017 75	132 28	1,338 50	24,356 25	139 98
August.....	20	3,181.5	159.0	3,375	169.0	19,274 25	114 05	1,078 00	20,352 25	120 43
September.....	24	3,353.0	140.0	3,464	144.0	20,305 50	141 04	1,347 50	21,653 00	150 37
October.....	19	1,104.0	58.0	1,328	70.0	6,678 75	95 41	754 00	7,432 75	106 18
November.....	10	284.0	28.0	331	33.0	1,703 25	52 40	52 50	1,755 75	53 20
Street cleaning.....	25	37.5	1.5	47	1.6	55 27	.....	.....	.....	.....
Totals.....	196	19,894.0	881.0	21,856	971.6	\$120,017 19	.....	\$9,218 13	.....	.....
Less March and November.....	158	19,549.0	847.0	21,455	930.0	\$118,097 25	\$854 99	\$8,060 88	\$126,158 13	\$926 46
Averages April to October, incl....	22.5	2,792.7	121.0	3,065	132.8	.....	\$122 14	.....	.....	\$132 35

NOTE.—During March only watering carts of the Street Cleaning Division were used. During the remaining months an occasional street cleaning cart was put out to cover particular territory or under extraordinary conditions. The average is given for April to October, inclusive, as that period covers the regular watering season.

Calcide Process. Calcium Chloride Treatment.

DISTRICTS.	Square Yards Cared For.	Cost per Square Yard.	Total Cost, July to November, Inclusive.	Average Number of Treatments.	Average Days Served by One Treatment.	Miles Cared For.
Back Bay.....	36,777	\$0 04	\$1,471 08	7.30	15.74	1.84
West Roxbury.....	152,050	04	6,082 00	7.64	19.53	10.83
Dorchester.....	79,305	04	3,172 20	5.62	20.22	4.95
Totals.....	268,132	.....	\$10,725 28	20.56	55.49	17.62
Averages.....	.....	.....	.....	6.85	18.49	.....

Previous to contract \$198 was paid for applying two coats to 23,000 square yards. \$3 was paid for teaming, outside contract.

Oil Application.

DISTRICTS.	Square Yards Cared For.	Miles Cared For.	Total Gallons of Oil Used.	Average Gallons per Yard.	Average Cost per Gallon.	Average Cost per Square Yard.	Estimated Cost for Six Months.	Average Days Served by One Oiling.
Dorchester.....	62,135	3.11	7,316.6	0.102	\$0 109	\$0 0100	\$0 0299	12.21
Roxbury.....	123,350	7.33	8,059.2	.065	108	0080	0502	9.08
South End.....	86,671	4.34	8,252.0	.095	107	0091	0286	11.48
Back Bay.....	207,534	11.00	24,391.7	.117	101	0119	0267	12.73
Totals.....	479,690	25.78	48,019.5	0.379	425	0390	1354	45.50
Averages.....	.....	.....	.....	0.095	106	0098	0339	11.375
Park Department.....	149,668	7.5	23,405.0	0.16	097	0155	0335	8.98

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

STREET CLEANING.

Machine Sweeping of Paved Streets and Gutters.

DISTRICT NUMBER.	PAVED STREETS.			GUTTERS.		TOTAL.	PAVED STREETS.			GUTTERS.			PAVED STREETS AND GUTTERS.			LOADS OF DIRT REMOVED.		CUBIC YARDS OF DIRT REMOVED.		Cost per Cubic Yard of Dirt Removed.
	Miles Cleaned Once.	Average Thousand Square Yards per Mile.	Thousand Square Yards Cleaned Once.	Miles Cleaned Once.	*Thousand Square Yards Cleaned Once.	Total Thousand Square Yards Cleaned Once, Streets and Gutters.	Total Cost.	Cost per Mile Cleaned Once.	Cost per Thousand Square Yards Cleaned Once.	Total Cost.	Cost per Mile Cleaned Once.	Cost per Thousand Square Yards Cleaned Once.	Total Cost.	Cost per Mile Cleaned Once.	Cost per Thousand Square Yards Cleaned Once.	† Total.	Per Thousand Square Yards.	† Total.	Per Thousand Square Yards.	
1.....	1,561.07	21.0	32,782	763.36	4,030	36,812	\$16,467 74	\$10 54	\$0 502	\$2,797 10	\$3 66	\$0 694	\$19,264 84	\$8 29	\$0 523	18,468	0.50	32,978	0.90	\$0 584
2.....	649.70	21.3	13,838	684.42	3,613	17,451	6,161 25	9 48	445	5,846 29	8 54	1 617	12,007 54	9 00	688	7,560	.43	13,406	.77	896
3.....	1,161.68	22.7	26,370	408.23	2,155	28,525	12,753 27	10 98	483	3,194 53	7 84	1 482	15,947 80	10 15	559	9,979	.35	18,247	.64	874
6.....	227.93	20.6	4,695	720.62	3,804	8,499	5,806 78	25 47	1 236	3,770 50	5 23	991	9,577 28	10 10	1 127	5,235	.62	9,114	1.07	1 051
7.....	893.65	22.1	19,749	255.99	1,351	21,100	15,114 60	16 91	764	3,207 62	12 53	2 374	18,322 22	15 93	868	8,115	.38	14,453	.68	1 268
8. {	Uptown.....	20.2	25,023	448.44	2,367	27,390	12,974 20	10 47	518	3,674 87	8 19	1 553	16,649 07	9 88	608	8,176	.29	14,401	.53	1 156
	Downtown.....	20.2	115,127	135.54	715	115,842	41,521 16	7 28	361	.....	.....	.....	41,521 16	7 12	358	17,275	.15	29,978	.26	1 385
9.....	818.44	20.2	16,532	633.67	3,345	19,877	4,083 10	4 99	247	7,815 58	10 23	2 336	11,898 68	8 19	598	5,043	.25	8,926	.45	1 333
10. {	West End.....	20.2	43,679	184.94	976	44,655	17,102 61	7 91	391	.....	.....	.....	17,102 61	7 29	383	8,101	.18	14,347	.32	1 192
	North End.....	20.2	40,454	.....	.....	40,454	17,633 22	8 80	435	.....	.....	.....	17,633 22	8 80	435	8,088	.19	14,265	.35	1 236
Totals.....	16,415.71	.....	338,249	4,235.21	22,356	360,605	\$149,617 93	.....	.....	\$30,306 49	.....	.....	\$179,924 42	.....	.....	96,040	.....	170,115	.....	.....
Average.....	.....	20.9	.....	.....	.....	.....	.....	\$9 11	\$0 442	.....	\$7 15	\$1 355	.....	\$8 72	\$0 499	.....	0.27	.....	0.47	\$1 058

* Counting each gutter 4½ feet wide.

† Loads: 42 cubic feet up to July 1; 54 cubic feet from July 1 to January 28, 1909.

STREET CLEANING AND WATERING.

Contracts, Year Ending January 31, 1909.

NATURE OF CONTRACT.	With Whom.	Amount.	Date.
Five years' lease of stable (Street Cleaning)	R. S. Brine Transportation Company	\$1,000 00	September 1, 1908.
Calcium chloride on streets (Street Watering)	Calcium Chloride Company	10,923 28	February 1, 1908, to January 31, 1909.

APPENDIX H.

REPORT OF THE CIVIL SERVICE CLERK.

Boston, February 1, 1909.

MR. GUY C. EMERSON,
Superintendent of Streets:

DEAR SIR,— I submit herewith a report of the work performed in connection with the Civil Service Commission for the year ending January 31, 1909:

Requisitions made	71
Requisitions canceled	3
Certificates returned, no selection being made	26
Number of men called for	208
Number of men certified	364
Number of men selected, including veterans	80
Number of veterans appointed	5
Number of men appointed provisionally	7
Applications made for promotion	39
Promotions allowed	5
Promotions allowed provisionally	34
Requests for permission to reinstate	16
Requests for permission to reinstate allowed	9
Requests for permission to reinstate not allowed	7
Number of men resigned through absence	63
Number of men resigned through absence reinstated	24
Number of men reported to Civil Service Commission as not having worked for more than six months	427
Number of men reported to Civil Service Commission as having resigned	20
Number of men reported to Civil Service Commission dead	89
Number of discharges forwarded to Civil Service Commissioners	253

Number of transfers made from other city and state departments to the Street Department, as follows:

From Bath Department	1
From Charles River Basin Commission	2
From Metropolitan Park Department	2
From Metropolitan Water and Sewerage Board	1
	6

Number of transfers from the Street Department to other city and state departments, as follows:

To Charles River Basin Commission	1
To Fire Department	1
To Metropolitan Water and Sewerage Board	3
To Police Department	3
To Schoolhouse Department	1
	9

Grade and Number of Employees.

TITLE.	DIVISIONS.							
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.
Superintendent	1							
Deputies		1	1	1	1	1	1	1
Clerks	4	25	20	7	5	2	2	1
Messengers	1	5	1	2	1		1	1
Chief engineers (civil)		1	1					
Assistant engineers (civil)		5	14					
Draughtsmen			15					
Instrument-men			10					
Rodmen		2	25					
Aids and tallymen		3	1					
Axeman		1						
Inspectors		37	42	39	4			4
Foremen		9	9	7	9			
Sub-foremen		23	5		26		3	
Blacksmiths and assistants		6	4	12				
Boilermakers and assistants						2		
Bracers and assistants			15					
Boys		1			1			
Chauffeurs		1	2					
Carpenters and assistants		8	13	1		2	5	
Chief inspector			1					
Cement testers			2					
<i>Carried forward</i>	6	128	181	69	47	7	12	7

Grade and Number of Employees.—*Continued.*

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	
<i>Brought forward</i>	6	128	181	69	47	7	12	7	457
Coal passers			8						8
Cashier						1			1
Drawtenders and assistants							132		132
Drivers		4	2	1	1		1		9
Dynamo tender			1						1
Deckhands						21			21
Dumpers				22					22
Engineers (steam)		14	18		1				33
Engineers (marine)						12			12
Electricians			1			1	1		3
Filth-hoist men			4						4
Feeder		1							1
Firemen			13			36			49
Gatemen			4			13			17
Harnessmakers and assistants		1		4					5
Horseshoers				4					4
Hostlers			12				1		13
Janitors		1		1		6	1		9
Janitresses						5			5
Joiners						3			3
Laborers and helpers		426	243	461	297	6	2		1,435
Lamplighters						2			2
Machinists and assistants			7			1	1		9
Mate			1						1
Masons (stone and brick)			8						8
Mechanic on scows				1					1
Oilers			13			8			21
Oil tester			1						1
Pavers and assistants		7							7
Painters		2		7	1	1	5		16
Pilots			1			11			12
Pipe layers			2						2
<i>Carried forward</i>	6	584	520	570	347	134	156	7	2,324

Grade and Number of Employees.— *Concluded.*

TITLE.	DIVISIONS.								
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Lamp.	Total.
<i>Brought forward</i>	6	584	520	570	347	134	156	7	2,324
Powdermen.....		6							6
Quartermasters.....						11			11
Rigger.....						1			1
Rammers.....		6							6
Supervisor of construction.....							1		1
Sailors.....			2						2
Steam drillers.....		4	1						5
Sanitary engineer.....				1					1
Stenographers.....		1	2				1		4
Sign painters.....				2					2
Stonecutters.....		6	2						8
Superintendent main drainage.....			1						1
Storekeepers.....			1			1			2
Scowmen.....				3					3
Stablemen.....		14		29	17		1		61
Sweeping machine drivers.....					24				24
Teamsters.....		76	29				3		108
Tollmen.....						12			12
Watchmen.....		22	31	6	5	3	5	1	73
Weighers and assistants.....		6		1					7
Wharfingers and assistants.....		2		1					3
Wheelwrights and assistants.....				3					3
Yardmen.....		2	6	12	3				23
Totals.....	6	729	595	628	396	162	167	8	2,691

Comparative Table Showing the Number of Employees February 1, 1908, and February 1, 1909.

	Central Office.	Bridge.	Ferry.	Lamp.	Paving.	Sanitary.	Sewer.	Street Cleaning and Watering.	Total.
February 1, 1908 ..	.....	168	193	153	886	731	855	500	3,486
February 1, 1909 ..	6	167	162	8	729	628	595	396	2,691

Respectfully submitted,

DANIEL R. MURRAY,
Civil Service Clerk.

APPENDIX I.

REPORT OF THE COMMISSIONERS OF BOSTON AND
CAMBRIDGE BRIDGES.

Appropriation	.	.	.	.	.	.	None
Expenditures	.	.	.	.	.	.	\$18,524 29

The commission is composed of two members, one appointed by the Mayor of the City of Boston and the other appointed by the Mayor of the City of Cambridge. They have charge of the care and maintenance of the following seven bridges connecting Boston and Cambridge: Brookline Street, Cambridge, Cambridge Street, Harvard, North Harvard Street, Prison Point and Western Avenue to Cambridge.

As no specific appropriation was made for the work of the past year, the Boston share of the expenses was paid directly from the appropriation for Bridge Division, Street Department.

The bridges under the charge of the commission are, in general, in need of considerable repairs in the lines of renewal of woodwork and painting. This is particularly true of Harvard, Cambridge Street, North Harvard Street and Western Avenue bridges.

As usual, the greater portion of the executive work of the Commission has been performed by the Cambridge member.

Boston and Cambridge Bridges.

Draw Openings, February 1, 1908, to January 31, 1909.

	CAMBRIDGE STREET.		HARVARD.		PRISON POINT.		NORTH HARVARD STREET.		WESTERN AVENUE.	
	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.	Number of Openings.	Number of Vessels.
February .....	.....	.....	4	4	56	166	.....	.....	.....	.....
March .....	.....	.....	18	27	68	120	.....	.....	.....	.....
April	29	90	57	90	23	46	22	79	24	82
May	93	348	81	136	26	49	85	336	86	337
June	36	93	102	102	20	94	28	77	28	77
July	20	34	71	119	29	56	12	18	12	18
August	8	13	79	131	21	39	2	3	8	15
September	32	35	273	475	33	67	12	19	22	35
October	72	121	98	129	19	37	4	6	15	21
November	29	42	69	136	21	44	10	16	17	23
December	6	11	56	86	17	36	.....	.....	.....	.....
January, 1909 .....	.....	.....	.....	.....	12	19	.....	.....	.....	.....
Totals	325	787	908	1,435	345	773	175	554	212	608

Boston and Cambridge Bridges—Concluded.

Expenditures by the City of Boston, February 1, 1908, to January 31, 1909, Being One-half of Cost of These Bridges, the Other Half Being Paid by the City of Cambridge.

	Brookline Street.	Cambridge.	Cambridge Street.	Harvard.	North Harvard Street.	Prison Point.	Western Avenue.	General Account.	Totals.
Maintenance:									
Drawtenders and caretakers.....		\$2,588 47	\$1,202 58	\$2,837 89	\$431 99	\$2,783 82	\$1,118 58	.....	\$10,963 33
Lighting.....	\$276 66	2,415 68	45 00	1,097 12	.....	22 50	45 00	.....	3,901 96
Cleaning bridges.....	39 00	.....	.....	78 75	.....	21 00	.....	.....	138 75
Fuel.....	.....	.....	11 54	31 72	.....	11 54	.....	.....	54 80
Tools and hardware.....	87	32 02	20 35	46 20	6 55	10 58	7 00	.....	123 57
Commissioner.....	.....	.....	.....	.....	.....	.....	.....	\$233 32	233 32
Clerical services.....	.....	.....	.....	.....	.....	.....	.....	250 03	250 03
Printing, stationery and postage.....	.....	.....	.....	.....	.....	.....	.....	67 87	67 87
Travelling expenses.....	.....	.....	.....	.....	.....	.....	.....	35 00	35 00
Sundry expenses.....	.....	3 75	5 96	26 59	.....	6 68	.....	57 95	100 93
Repairs:									
Lumber.....	56 26	.....	42 91	374 22	109 58	100 13	165 79	.....	848 89
Ironwork.....	.....	123 52	22 00	160 57	.....	3 13	24 75	.....	333 97
General.....	51 38	30 59	54 11	999 26	110 23	29 90	196 40	.....	1,471 87
Totals.....	\$424 17	\$5,194 03	\$1,404 45	\$5,652 32	\$658 35	\$2,989 28	\$1,557 52	\$644 17	\$18,524 29

APPENDIX J.

Purchases Made for Street Department Divisions by the Supply Department, Year ending January 31, 1909.

(Reprint from Annual Report of the Supply Department.)

	Bridge.	Ferry.	Lamp.	Paving.	Sanitary.	Sewer.	Street Cleaning and Watering.
Auto supplies.....	.....	.....	.....	\$2,482 87	\$2,119 29	\$1,029 43	\$27 00
Bags.....	.....	.....	.....	.....	.....	420 12	11 49
Badges.....	.....	.....	.....	3 75	20 16	3 75	
Blankets.....	\$23 00	.....	\$3 75	136 00	56 75	136 00	60 00
Bricks, paving.....	1 26	\$4 00	.....	8,067 72			
Bricks, sewer.....	.....	.....	.....	.....	.....	16,236 97	
Brooms.....	104 10	192 98	.....	105 44	249 23	94 85	1,374 47
Carriage supplies.....	50 60	.....	.....	280 81	2,132 57	60 43	32 95
Castings.....	10 01	164 87	.....	308 44	295 05	3,712 97	5 00
Cement (Natural).....	.....	.....	.....	17 85	.....	523 50	
Cement (Portland).....	.....	19 60	.....	250 10	.....	30,547 96	
Chemicals.....	6 00	21 34	.....	223 03	.....	7 13	80 00
Clocks.....	6 50	.....	.....	9 35	9 00	62 15	
Coal (bituminous).....	.....	31,536 48	.....	1,455 85	198 55	27,554 53	

Coal (anthracite).....	3,128 54	.....	.....	6,190 91	1,254 41	4,783 94	237 79
Corn.....	10 59	.....	.....	321 15	276 45	81 02	
Car tickets.....	15 80	20 00	.....	.....	.....	191 00	26 00
Disinfectant.....	.....	.....	.....	61 95	106 25	133 25	
Draughting supplies.....	3 45	.....	.....	109 05	.....	1,343 58	30 00
Drugs.....	15 90	2 83	.....	44 88	110 20	52 90	42 25
Dry goods.....	6 00	.....	.....	32 78	70 44	48 37	
Edgestones.....	.....	.....	.....	19,182 52	.....	.....	
Electric supplies.....	124 83	235 28	.....	59 14	11 44	421 43	
Explosives.....	.....	.....	.....	602 45	.....	91 63	
Engine parts.....	104 68	400 30	.....	1,039 01	277 54	5,013 27	597 73
Flagging.....	.....	.....	.....	4,702 89	.....	6 00	
Furniture.....	12 24	.....	3 00	6 00	.....	.....	
Garbage cans.....	27 80	65 60	.....	7 65	360 25	95 30	421 27
Gasolene.....	.....	.....	.....	84 95	.....	90 57	
Glass.....	11 25	36 19	173 43	28 69	35 75	20 43	
Gravel, bank.....	.....	.....	.....	9,331 61	.....	3,011 51	
Gravel, beach.....	.....	.....	.....	1,840 50	.....	.....	
Grease.....	9 89	123 68	.....	58 21	113 56	253 68	43 30
Hardware.....	2,530 05	579 09	.....	480 15	680 49	843 10	69 40
Harnesses.....	.....	.....	1 35	205 92	1,214 69	142 56	6 00
Carried forward.....	\$6,202 49	\$33,402 24	\$181 53	\$57,731 62	\$9,592 07	\$97,013 33	\$3,064 65

Purchases Made for Street Department Divisions by the Supply Department. — Continued.

	Bridge.	Ferry.	Lamp.	Paving.	Sanitary.	Sewer.	Street Cleaning and Watering.
<i>Brought forward</i>	\$6,202 49	\$33,402 24	\$181 53	\$57,731 62	\$9,592 07	\$97,013 33	\$3,064 65
Hay.....	689 89	.....	.....	10,152 83	18,519 77	4,439 66	5,331 55
Horses.....	.....	.....	.....	.....	4,515 00	.....	.....
Horse supplies.....	51 73	.....	.....	630 92	2,221 58	108 62	87 38
Hose.....	14 00	396 45	.....	142 87	143 53	1,618 45	300 27
Hospital supplies.....	.....	.....	.....	.....	.....	12 00	.....
Iron.....	.....	67 26	.....	65 08	1,200 13	169 56	10 30
Lead, white.....	39 00	258 10	.....	.....	201 75	42 69	.....
Lighting supplies.....	54 48	156 17	.....	335 80	2 97	219 46	5 92
Lime.....	.....	.....	.....	1 25	3 40	5 00	1 25
Lumber, spruce.....	10,461 21	2,800 52	.....	4,810 64	1,743 84	19,687 07	71 44
Lumber, hard pine.....	1,735 13	1,380 11	.....	359 30	154 43	755 52	12 55
Lumber, hard wood.....	1,084 29	2,349 32	.....	659 71	1,916 44	374 76	.....
Oats.....	596 86	.....	.....	10,643 17	31,883 54	4,543 71	9,877 94
Oatmeal.....	.....	.....	.....	106 10	.....	116 89	.....
Office supplies.....	.....	28 50	.....	21 75	24 01	311 73	1 50
Oil, cylinder.....	875 15	796 13	.....	220 16	15 50	691 11	11 80
Oil, engine.....	77 57	611 83	.....	112 53	.....	723 57	87 54

Oil, illuminating.....	70 79	300 22	.....	701 90	68 96	803 57	13 65
Oil, road.....	.....	.....	.....	.....	.....	.....	2,381 16
Oil, linseed.....	23 43	128 60	.....	9 05	70 06	29 60	3 30
Machinery.....	.....	.....	.....	245 00	.....	2,836 00	1,551 71
Manhole covers.....	.....	.....	.....	.....	.....	5,547 29	.....
Manhole steps.....	.....	.....	.....	.....	.....	987 38	.....
Packing.....	10 30	491 61	.....	77 36	.....	3,925 75	5 00
Paints.....	114 25	271 41	.....	124 43	536 96	142 18	72 81
Paving blocks.....	.....	.....	.....	10,429 91	.....	170 50	.....
Pipe, iron.....	.....	29 44	.....	.....	26 23	951 55	28 88
Pipe, sewer.....	.....	.....	.....	.....	28 00	6,613 57	.....
Plumbers' supplies.....	.....	18 00	.....	.....	5 49	873 83	.....
Polish, metal.....	.....	55 83	.....	15 75	10 00	157 30	6 10
Rugs.....	.....	.....	.....	.....	32 50	32 73	.....
Rubber goods.....	13 06	.....	.....	19 13	22 81	2,337 00	71 33
Salt.	19 40	.....	.....	11 18	31 91	88 46	.....
Sand, bank.....	.....	.....	.....	4,665 00	.....	5,783 08	40 00
Sand, beach.....	50 00	.....	.....	1,975 85	.....	53 45	239 65
Seeds.....	.....	.....	.....	.....	.....	14 11	.....
Sewer traps.....	.....	.....	.....	.....	.....	4,103 84	.....
Ship chandlery.....	178 20	715 12	.....	23 79	1,050 82	1,167 44	6 68
Carried forward.....	\$22,361 23	\$44,256 86	\$181 53	\$104,292 08	\$74,021 70	\$167,451 76	\$23,284 36

APPENDIX K.

FORMER SUPERINTENDENTS AND DOCUMENT
NUMBERS OF ANNUAL REPORTS.

Bridge Department before 1891.

Previous to 1886 under charge of City Engineer.

NAME.	Year.
Bartholomew M. Young.....	1886 to 1889
James H. Nugent.....	1889 to 1891

Bridge Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1886	1887	29
“ “	1887	1888	26
“ “	1888	1889	29
“ “	1889	1890	22
“ “	1890	1891	*

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Lamp Department before April 6, 1908.

SUPERINTENDENTS.	From	To
William Barnicoat.....	1854	Feb. 18, 1867
George H. Allen, Acting Superintendent..	Feb. 19, 1867	April 1, 1867
George H. Allen.....	April 1, 1868	April 2, 1883
Hugh J. Toland.....	April 2, 1883	April 18, 1884
John T. Manson.....	April 18, 1884	April 6, 1885
Hugh J. Toland.....	April 6, 1885	May 1, 1889
George H. Allen.....	May 1, 1889	June 1, 1891
Patrick O'Shea.....	June 1, 1891	May 1, 1895
James Buckner.....	May 1, 1895	Oct. 1, 1896
James Donovan.....	Oct. 1, 1896	Mar. 1, 1900
Bertrand T. Wheeler, Acting Superintend- ent	Mar. 1, 1900	Mar. 10, 1900
William D. Lang.....	Mar. 10, 1900	July 28, 1901
William Jackson, Acting Superintendent..	July 28, 1901	Jan. 30, 1902
John Drohan.....	Jan. 30, 1902	Aug. 10, 1902
James Donovan, Acting Superintendent..	Aug. 10, 1902	Jan. 3, 1906
Charles Logue, Acting Superintendent....	Jan. 3, 1906	Feb. 28, 1906
Dennis J. Hern.....	Feb. 28, 1906	April 5, 1908
Edward C. Wade, Acting Superintendent.	April 5, 1908	April 6, 1908

Paving Department before 1891.

NAME.	Year.
Enoch Patterson, Superintendent Streets and Drains.....	1825 to 1831
Zephaniah Sampson, " " " "	1831 to 1846
Thomas Hunting, Superintendent.....	1846 to 1853
Alfred T. Turner, "	1853 to 1864
Charles Harris, "	1864 to 1883
Nehemiah T. Merritt, "	1883
James J. Flynn, "	1883
Charles Harris, "	1884
Michael Meehan, "	1884 to 1886
John W. McDonald, "	1886 to 1889
J. Edwin Jones, "	1889 to 1891

Paving Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Quarterly report.....	.....	1851	6
" " .....	.....	1851	29
Annual report.....	1851	1852	2
" "	1852	1853	6
" "	1853	1854	6
" "	1854	1855	5
" "	1855	1856	3
" "	1856	1857	3
" "	1857	1858	3
" "	1858	1859	5
" "	1859	1860	6
" "	1860	1861	5
" "	1861	1862	4
" "	1862	1863	3
" "	1863	1864	3
" "	1864	1865	7
" "	1865	1866	3
" "	1866	1867	6
" "	1867	1868	9
" "	1868	1869	14
" "	1869	1870	13
" "	1870	1871	12
" "	1871	1872	16
" "	1872	1873	21
" "	1873	1874	25
" "	1874	1875	27
" "	1875	1876	30
" "	1876	1877	38
" "	1877	1878	29
" "	1878	1879	24
" "	1879	1880	24
" "	1880	1881	48
" "	1881	1882	51
" "	1882	1883	47
" "	1883	1884	46

Paving Department before 1891.— *Concluded.*

NAME OF DOCUMENT.	For Year	Pub. Year.	No. of Doc.
Annual report.....	1884	1885	97
“ “.....	1885	1886	30
“ “.....	1886	1887	16
“ “.....	1887	1888	23
“ “.....	1888	1889	30
“ “.....	1889	1890	19
“ “.....	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Sewer Department before 1891.

NAME.	Year.
Enoch Patterson, Superintendent.....	1825 to 1831
Zephaniah Sampson, “.....	1831 to 1837
Charles B. Wells, “.....	1837 to 1856
Simeon B. Smith, “.....	1856 to 1863
William H. Bradley, “.....	1863 to 1883
Horace A. Moses, “.....	1883 to 1885
Thomas J. Young, “.....	1885 to 1887
Seth Perkins, “.....	1887 to 1889
Charles Morton, “.....	1889 to 1891

Sewer Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1859	1861	11
“ “.....	1860	1861	12
“ “.....	1861	1862	12
“ “.....	1862	1863	13
“ “.....	1863	1864	11
“ “.....	1864	1865	5
“ “.....	1865	1866	6
“ “.....	1866	1867	8
“ “.....	1867	1868	13
“ “.....	1868	1869	11
“ “.....	1869	1870	3
“ “.....	1870	1871	11
“ “.....	1871	1872	10
“ “.....	1872	1873	13
“ “.....	1873	1874	12
“ “.....	1874	1875	17
“ “.....	1875	1876	11
“ “.....	1876	1877	13
“ “.....	1877	1878	15
“ “.....	1878	1879	11
“ “.....	1879	1880	16

Sewer Department before 1891.—*Concluded.*

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1880	1881	19
“ “.....	1881	1882	18
“ “.....	1882	1883	16
“ “.....	1883	1884	43
“ “.....	1884	1885	
“ “.....	1885	1886	58
“ “.....	1886	1887	69
“ “.....	1887	1888	81
“ “.....	1888	1889	129
“ “.....	1889	1890	14
“ “.....	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Health Department before 1891.

Sanitary.

NAME.	Year.
Ezra Forristall, Superintendent.....	1853 to 1854
Joseph W. Coburn, “.....	1854 to 1855
Ezra Forristall, “.....	1855 to 1869
George W. Forristall, “.....	1869 to 1890

Health Department before 1891.

Sanitary.

NAME OF DOCUMENT.	Year.	Pub. Year.	No. of Doc.
Annual report.....	1853	1854	7
“ “.....	1854	1855	6
“ “.....	1855	1856	4
“ “.....	1856	1857	4
“ “.....	1857	1858	4
“ “.....	1858	1859	4
“ “.....	1859	1860	5
“ “.....	1860	1861	6
“ “.....	1861	1862	5
“ “.....	1862	1863	5
“ “.....	1863	1864	4
“ “.....	1864	1865	4
“ “.....	1865	1866	8
“ “.....	1866	1867	7
“ “.....	1867	1868	8
“ “.....	1868	1869	12
“ “.....	1869	1870	4

Health Department before 1891.—*Concluded.*

NAME OF DOCUMENT.	Year.	Pub. Year.	No. of Doc.
Annual report.....	1870	1871	10
“ “	1871	1872	17
“ “	1872	1873	40
Annual reports from 1873 to 1884, inclusive; the Superintendent’s re- port was embodied in the report of the Board of Health.....	1885	1886	45
Annual report.....	1886	1887	22
“ “	1887	1888	16
“ “	1888	1889	23
“ “	1889	1890	21
“ “	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Commissioners of Cambridge Bridges before 1891.
(West Boston, Canal and Prison Point.)

NAME.	YEAR.
Frederick W. Lincoln, Commissioner for Boston....	{ May 22, 1871, to March, 1901.
Ezra Parmenter, Commissioner for Cambridge.....	{ June 14, 1871, to Jan. 31, 1883.
William J. Marvin, Commissioner for Cambridge...	{ March 28, 1883, to July 22, 1904.
George M. Clukas, Commissioner for Cambridge....	{ July 26, 1904, to present time.

NOTE.—Harvard Bridge added in 1892. Essex Street, Cambridge Street, North Harvard Street, and Western Avenue bridges to Cambridge were transferred from Street Department July 1, 1898.

Commissioners of Cambridge Bridges before 1891.
(West Boston, Canal and Prison Point.)

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1871	1872	19
“ “	1872	1873	12
“ “	1873	1874	16
“ “	1874	1875	23
“ “	1875	1876	20
“ “	1876	1877	12
“ “	1877	1878	10
“ “	1878	1879	8
“ “	1879	1880	12
“ “	1880	1881	8

Commissioners of Cambridge Bridges before 1891.—*Concluded.*

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1881	1882	15
“ “	1882	1883	15
“ “	1883	1884	19
“ “	1884	1885	8
“ “	1885	1886	12
“ “	1886	1887	19
“ “	1887	1888	25
“ “	1888	1889	22
“ “	1889	1890	20
“ “	1890	1891	*

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Ferry Department before 1895.

NAME.	Year.	
Board of Ferry Directors.....	1870	1891
William J. Burke, Superintendent.....	1891	May 1, 1895
Thomas Kellough.....	May 1, 1895	July 1, 1895

Ferry Department before 1895.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report.....	1870	1871	41
“ “	1871	1872	55
“ “	1872	1873	81
“ “	1873	1874	42
“ “	1874	1875	65
“ “	1875	1876	51
“ “	1876	1877	53
“ “	1877	1878	49
“ “	1878	1879	60
“ “	1879	1880	74
“ “	1880	1881	77
“ “	1881	1882	72
“ “	1882	1883	93
“ “	1883	1884	76
“ “	1884	1885	72
“ “	1885	1886	28
“ “	1886	1887	12
“ “	1887	1888	10
“ “	1888	1889	3
“ “	1889	1890	4
“ “	1890	1891	*
“ “	1891	1892	12
“ “	1892	1893	11
“ “	1893	1894	11
“ “	1894	1895	11

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Street Department since 1891.

Superintendent.

Henry H. Carter, Member of American Society Civil Engineers.

Resigned December 8, 1894.

Charles R. Cutter, *Acting Superintendent from December 8, 1894, to January 14, 1895.*
Member of the Boston Society Civil Engineers.

Bertrand T. Wheeler, *Superintendent from January 14, 1895, to February 4, 1896.*
Member of the Boston Society Civil Engineers.

Benjamin W. Wells, *Superintendent from February 4, 1896, to February 1, 1900.*

Bertrand T. Wheeler, *Superintendent from February 2, 1900, to November 25, 1901.*
Member of the Boston Society Civil Engineers.
Resigned November 25, 1901.

William Jackson, *Acting Superintendent from November 25, 1901, to January 14, 1902.*
Member of American Society Civil Engineers.

Guy C. Emerson, *Deputy Superintendent in charge of the department from November 25, 1901, to January 14, 1902.*
Member of American Society Civil Engineers.
Member of the Boston Society Civil Engineers.

James Donovan, *Superintendent from January 14, 1902, to January 2, 1906.*
Resigned January 2, 1906.

Charles Logue, *Acting Superintendent from January 2, 1906, to February 28, 1906.*

James H. Doyle, *Superintendent from March 1, 1906, to January 6, 1908.*
Resigned January 6, 1908.

William Jackson, *Acting Superintendent from January 6, 1908, to April 13, 1908*
Member of American Society Civil Engineers.

James H. Sullivan, *Executive Engineer in charge of the department from January 6, 1908, to April 13, 1908.*

Guy C. Emerson, *Superintendent from April 14, 1908, to the present time.*
Member of American Society Civil Engineers.
Member of the Boston Society Civil Engineers.

BRIDGE DIVISION.— John A. McLaughlin, *Deputy Superintendent until June 1, 1895.*

BRIDGE DIVISION.— John P. Wise, *Deputy Superintendent from June 1, 1895, to February 14, 1896.*

BRIDGE DIVISION.— William K. Carberry, *Deputy Superintendent from February 14, 1896, to February 3, 1900.*

BRIDGE DIVISION.— Walter Reed, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

BRIDGE DIVISION.— Joseph P. Lomasney, *Deputy Superintendent from January 22, 1902, to December 30, 1905. Resigned December 30, 1905.*

BRIDGE DIVISION.— Peter O'Neil, *Acting Deputy Superintendent from December 30, 1905, to January 3, 1906.*

BRIDGE DIVISION.— Daniel J. Byrne, *Acting Deputy Superintendent from January 3, 1906, to February 28, 1906.*

BRIDGE DEPARTMENT.— Patrick F. McDonald, *Superintendent from March 1, 1906, to April 5, 1908.*

BRIDGE DEPARTMENT.— Thomas H. Sexton, *Acting Superintendent from April 5, 1908, to April 6, 1908.*

BRIDGE DIVISION.— Thomas H. Sexton, *Acting Deputy Superintendent from April 6, 1908, to July 17, 1908.*

BRIDGE DIVISION.— Thomas H. Sexton, *Deputy Superintendent from July 17, 1908, to the present time.*

FERRY DIVISION.— Thomas Kellough, *Deputy Superintendent from July 1, 1895, to February 14, 1896.*

FERRY DIVISION.— William F. McClellan, *Deputy Superintendent from February 14, 1896, to February 3, 1900.*

FERRY DIVISION.— Joseph J. Dennison, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

FERRY DIVISION.— William J. Donovan, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to February 1, 1906.*

FERRY DIVISION.— Joseph F. Low, *Acting Deputy Superintendent from February 1, 1906, to May 14, 1906.*

FERRY DIVISION.— John J. Douglass, *Deputy Superintendent from May 14, 1906, to March 9, 1907.*

FERRY DIVISION.— James H. Sullivan, *Executive Engineer in charge of division from March 9, 1907, to January 20, 1908.*

FERRY DIVISION.— Henry P. Christiernin, *Deputy Superintendent from January 20, 1908, to the present time.*

LAMP DIVISION.— Edward C. Wade, *Acting Deputy Superintendent from April 6, 1908, to July, 17, 1908.*

LAMP DIVISION.— Edward C. Wade, *Deputy Superintendent from July 17, 1908, to the present time.*

PAVING DIVISION.— Charles R. Cutter, *Deputy Superintendent until January 24, 1895.*

PAVING DIVISION.— Darius N. Payson, *Deputy Superintendent from January 24, 1895, to March 1, 1896.*

PAVING DIVISION.— John L. Kelly, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*

PAVING DIVISION.— Darius N. Payson, *Deputy Superintendent from February 3, 1900, to January 24, 1902.*

PAVING DIVISION.— Joshua Atwood, 3d, *Acting Deputy Superintendent from January 24, 1902, to March 26, 1902.*

PAVING DIVISION.— Henry V. Macksey, *Deputy Superintendent from March 26, 1902, to December 2, 1905. Resigned December 2, 1905.*

* PAVING DIVISION.— James H. Sullivan, *Acting Deputy Superintendent from December 2, 1905, to February 28, 1906.*

PAVING DIVISION.— James H. Sullivan, *Acting Deputy Superintendent from April 6, 1908, to July 17, 1908.*

PAVING DIVISION.— James H. Sullivan, *Deputy Superintendent from July 17, 1908, to the present time.*

SANITARY DIVISION.— George W. Forristall,† *Deputy Superintendent.*

SANITARY DIVISION.— Philip A. Jackson, *Acting Deputy Superintendent from January 16, 1894, to February 1, 1895.*

SANITARY DIVISION.— Charles A. Young, *Deputy Superintendent from February 1, 1895, to March 1, 1896.*

SANITARY DIVISION.— Patrick O'Shea, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*

* For period from February 28, 1906, to April 6, 1908, see Street Department since 1891, page 407.

† Died January 12, 1894.

SANITARY DIVISION.— Charles A. Young, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

SANITARY DIVISION.— Daniel P. Sullivan, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.*

SANITARY DEPARTMENT.— Daniel H. Gillespie, *Superintendent from March 1, 1906, to April 6, 1908.*

SANITARY DIVISION.— Daniel H. Gillespie, *Acting Deputy Superintendent from April 6, 1908, to May 8, 1908.*

SANITARY DIVISION.— George H. Foss, *Acting Deputy Superintendent from May 8 to May 25, 1908.*

SANITARY DIVISION.— George H. Foss, *Deputy Superintendent from May 25, 1908, to the present time.*

SEWER DIVISION.— Henry W. Sanborn, *Deputy Superintendent until July 10, 1896.*
Member of Philadelphia Society Civil Engineers.

SEWER DIVISION.— Charles R. Cutter, *Deputy Superintendent from July 10, 1896, to February 3, 1900.*
Member of the Boston Society Civil Engineers.

SEWER DIVISION.— Guy C. Emerson, *Deputy Superintendent from February 3, 1900, to November 25, 1901, and from January 14 to January 22, 1902.*
Member of American Society Civil Engineers.
Member of the Boston Society Civil Engineers.

SEWER DIVISION.— Henry W. Sanborn, *Acting Deputy Superintendent from November 25, 1901, to January 14, 1902.*
Member of Philadelphia Society Civil Engineers.

SEWER DIVISION.— George Phillips, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned.*

SEWER DIVISION.— George Phillips, *Acting Deputy Superintendent from January 3, 1906, to January 18, 1906.*

SEWER DIVISION.— Edgar S. Dorr, *Acting Deputy Superintendent from January 18, 1906, to March 1, 1906.*

SEWER DEPARTMENT.— John J. Leahy, *Superintendent from March 1, 1906, to January 10, 1908.*

SEWER DEPARTMENT.— Charles R. Cutter, *Acting Superintendent from January 10, 1908, to April 6, 1908.*

SEWER DIVISION.— Charles R. Cutter, *Acting Deputy Superintendent from April 6, 1908, to the present time.*

STREET CLEANING DIVISION.— Philip A. Jackson, *Deputy Superintendent until March 22, 1895.*

STREET CLEANING DIVISION.— Benjamin M. Cram, *Deputy Superintendent from March 22, 1895, to March 1, 1906.*

STREET CLEANING DIVISION.— Joshua Atwood, 3d, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*
Member of the Boston Society Civil Engineers.

STREET CLEANING DIVISION.— Frank H. Haynes, *Deputy Superintendent from February 3, 1900, to April 16, 1901. Resigned April 16, 1901.*

STREET CLEANING DIVISION.— Frank C. Shepard, *Deputy Superintendent from April 16, 1901, to January 22, 1902.*

STREET CLEANING DIVISION.— Joseph J. Norton, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.*

* STREET CLEANING AND WATERING DEPARTMENT.— Matthew Cummings, *Superintendent from March 1, 1906, to January 16, 1908.*

Daniel H. Gillespie, *Acting Superintendent from January 16, 1908, to April 6, 1908.*
Acting Deputy Superintendent from April 6, 1908, to April 15, 1908.

STREET CLEANING AND WATERING DIVISION.— C. Barton Pratt, *Deputy Superintendent from April 15, 1908, to the present time.*

STREET WATERING DIVISION.— M. Edward Libby, *Deputy Superintendent from March 6, 1895, to March 1, 1896.*

STREET WATERING DIVISION.— Thomas J. Finneran, *Deputy Superintendent from March 1, 1896, to February 3, 1900.*

STREET WATERING DIVISION.— Frederick Hammond, *Deputy Superintendent from February 3, 1900, to January 22, 1902.*

* STREET WATERING DIVISION.— Ambrose Woods, *Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned.*
Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.

BOSTON AND CAMBRIDGE BRIDGES.— Henry H. Carter, *ex officio, Commissioner for Boston, until December 8, 1894.*

Charles R. Cutter, *ex officio, Acting from December 8, 1894, to January 14, 1895.*

Bertrand T. Wheeler, *ex officio, from January 14, 1895, to February 4, 1896.*

Benjamin W. Wells, *from February 4, 1896, to February 2, 1900; ex officio, to May 26, 1898.†*

Bertrand T. Wheeler, *from February 2, 1900, to November 25, 1901.*

Guy C. Emerson, *from November 25, 1901, to January 14, 1902.*

James Donovan, *from January 14, 1902, to October 28, 1904.*

Joseph P. Lomasney, *from October 28, 1904, to December 30, 1905.*

Peter O'Neil, *December 30, 1905, to January 3, 1906.*

Charles Logue, *from January 3, 1906, to March 1, 1906.*

Patrick F. McDonald, *from March 1, 1906, to April 5, 1908.*

Thomas H. Sexton, *from April 5, 1908, to May 1, 1908.*

Guy C. Emerson, *from May 1 1908, to the present time.*

William J. Marvin, *Commissioner for Cambridge.‡*

George M. Clukas, *July 26, 1904, to December 19, 1907.*

William H. Joyce, *from December 19, 1907, to the present time.*

* March 1, 1906, Street Watering Division consolidated with the Street Cleaning Division under title of Street Cleaning and Watering Department.

† See chapter 467, Acts of 1898.

‡ Died July 22, 1904.

Street Department.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report, Executive Dept., Part II	1891	1892	36
“ “ “ “ “	1892	1893	34
“ “ “ “ “	1893	1894	34
“ “ “ “ “	1894	1895	34
“ “ “ “ “	1895	1896	29
“ “ “ “ “	1896	1897	29
“ “ “ “ “	1897	1898	34
“ “ “ “ “	1898	1899	35
“ “ “ “ “	1899	1900	38
“ “ “ “ “	1900	1901	38
“ “ “ “ “	1901	1902	38
“ “ “ “ “	1902	1903	40
“ “ “ “ “	1903	1904	40
“ “ “ “ “	1904	1905	40
“ “ “ “ “	1905	1906	40
“ “ “ “ “	1906	1907	42
“ “ “ “ “	1907	1908	42
“ “ “ “ “	1908	1909	38



ANNUAL REPORT
OF THE
STREET LAYING-OUT DEPARTMENT
FOR THE YEAR ENDING JANUARY 31, 1909.

BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— The Board of Street Commissioners presents the following as the report of the Street Laying-Out Department, including a statement relating to public lands in its care, for the year ending January 31, 1909.

Under the orders for laying out, widening and extending streets, passed by the Board during the year, land to the amount of 54,355 square feet was taken for street purposes. Streets having a total length of 2.77 miles were made public ways. Under authority of the acts of the Legislature, for the assessment upon abutting property of the benefit derived by it from the laying out and construction of streets, there has been assessed upon twenty-four streets a total of \$116,334.60. For benefits of sewerage works assessments to the amount of \$88,413.61 have been made. The total of benefits assessed for streets, public alleys and sewerage works during the year was \$204,748.21.

The Board issued 39 orders of notice of intention to lay out, widen, relocate, extend and discontinue streets or parts

of streets calling for public hearings. It considered 22 petitions for street improvements, and has received 64 requests from the city government for the laying out of streets, and estimates of the cost of such work. In the settlement of damages for taking of land, etc., for various changes in the city's streets, 21 cases were acted upon. Claims for damages for sewers and surface drains ordered were settled to the number of 6. Under authority of the act empowering the Board to apportion assessments on parts of a divided lot, 53 assessments were apportioned.

Under the provisions of the acts of the Legislature giving the Street Commissioners authority to take land for and order the construction of sewerage works, orders were passed for the improvement and relocation of various natural streams or water-courses, and surface drainage has been supplied for territories needing it as follows:

Roxbury.—In Elmwood street, southwesterly from Linden Park street; Stony Brook, at Rogers avenue and Ruggles street.

Dorchester.—In Fremont street, Norfolk street to River street.

West Roxbury.—Relocation Stony brook, at Ashland street; relocation Stony brook, from Belgrade avenue opposite Aldrich street; relocation Beech street branch of Dale street brook, between Beech street and James street; in Fairview street, private land to South street; Roslindale branch of Stony brook, relocated at Ashland street.

In East Boston takings were made for an outlet for the Condor and Glendon street districts, to connect with the metropolitan sewer.

Takings were made and house sewers ordered to be built in the following private ways:

Alley No. 705, from Shawmut avenue to Tremont street.

East Boston.—Cleveland street, from Prescott street, 197 feet southwesterly.

Dorchester.—South Munroe terrace, Neponset avenue to Train street.

Charlestown.—Charles Street place.

Brighton.—Commonwealth terrace, from Allston street.

West Roxbury.—Fairview street (private land between) and South street; Beech street (private land between) and James street; James street, Poplar street to Kittredge street; Perkins street, Canterbury street to near Grew street; Richards avenue, Hyde Park avenue to boundary line; Sherwood street, northeasterly from Norfolk street; West street, Bellevue avenue to Orange street.

The following are the new streets, with their lengths, laid out as public streets during the year :

South Boston.

	Feet.
Hatch street	250.00
Covington street	250.00
	500.00

East Boston.

Prescott street	1,250.00

Roxbury.

Evergreen street	274.27
Benton street	308.47
Roessle court	135.50
	718.24

Dorchester.

Stonehurst street	778.00
Wellesley park	800.00
Belfort street	150.00
Upham avenue	354.25
Carmen street.	632.00
Maybrook street	378.96
Dayton street	222.32
Radcliffe street	1,020.27
Cottage terrace	627.79
Rexford street	987.58
Mountain avenue	1,185.96
	7,137.13

Brighton.

Newcastle road	778.87
Montfern avenue	763.54
	1,542.41

West Roxbury.

Cotton street	703.65
Fletcher street	1,491.00
Walworth street	584.00
Farquhar street	707.00
	3,485.65

Recapitulation.

South Boston	500.00
East Boston	1,250.00
Roxbury	718.24
Brighton	1,542.41
Dorchester	7,137.13
West Roxbury	3,485.65

14,633.43 feet = 2.77 miles.

The part of North Anderson street north of Fruit street was discontinued as a highway.

The following takings were made for the laying out of new streets and widenings:

Dorchester.

Wellesley park	Square Feet. 28,971
--------------------------	------------------------

Brighton.

Newcastle road	3,314
Selkirk road	251
Lincoln street	238
	<u>3,803</u>

West Roxbury.

Evergreen street	11,420
Walworth street	10,161
	<u>21,581</u>

Recapitulation.

Dorchester	28,971
Brighton	3,803
West Roxbury	21,581
	<u>54,355</u>

Acting under the provisions of chapter 393 of the Acts of the Legislature of 1906, the Board of Street Commissioners during the past year gave permission to the landowners to open the following private ways:

Roxbury.

Posen street, Arklow street to Ulmer street.

Dorchester.

Pleasant terrace, leading southeasterly from Pleasant street.
Devon street, from Columbia road to Vaughan street.
Lena park, leading northwesterly from Harvard street.
Manley street, from Mill street to Newkirk street.
Newkirk street, leading northeasterly from Neponset avenue.
Allerton road, leading northwesterly from Park street.
Melville road, from Washington street to Whitfield street.

Brighton.

Upland road, from Brooks street to Dunboy street.

Assessments were levied for street improvement upon estates abutting on the following streets:

STREET.	Date.	Cost.	Assessed.	Date of Assessment.
Rosemary street	Aug. 9, 1906	\$3,466 64	\$1,733 32	Feb. 11, 1908
Bradshaw street	May 4, 1906	1,766 50	883 25	Feb. 11, 1908
Rowe street	Oct. 22, 1903	6,606 37	1,624 34	Feb. 11, 1908
Fottler road	Oct. 18, 1906	2,861 77	1,082 15	April 29, 1908
Longfellow street	Oct. 15, 1906	10,287 17	5,143 58	July 29, 1908
Meredith street	Aug. 9, 1906	4,666 49	2,212 28	July 29, 1908
Lorraine street	Aug. 9, 1906	5,862 12	2,930 80	July 29, 1908
Milwood street	Aug. 9, 1906	6,002 72	3,001 36	July 29, 1908
Marmion street	Sept. 29, 1906	2,452 72	1,136 56	July 31, 1908
Oakridge street	Oct. 17, 1906	8,847 21	3,865 02	July 31, 1908
Dahlgren street	Nov. 20, 1906	2,407 38	1,042 20	Sept. 16, 1908
Roseland street	Nov. 3, 1906	3,298 28	1,439 00	Sept. 16, 1908
Pomfret street	Sept. 28, 1906	4,653 17	2,326 58	Sept. 16, 1908
Fenwood road	Dec. 5, 1906	11,298 44	5,649 22	Sept. 16, 1908
Willowwood street	Oct. 11, 1906	11,612 59	5,806 29	Sept. 16, 1908
Aspinwall road	Oct. 20, 1906	7,691 62	3,845 81	Sept. 16, 1908
Kerwin street	Dec. 1, 1906	5,145 63	2,572 81	Sept. 24, 1908
Bakersfield street	Oct. 17, 1906	7,641 81	3,820 90	Sept. 24, 1908
Hobson street	Nov. 22, 1906	7,983 21	3,991 60	Sept. 24, 1908
Primrose street	Oct. 15, 1906	6,064 39	3,032 19	Dec. 7, 1908
Claybourne street	Nov. 3, 1906	3,109 02	1,554 51	Dec. 7, 1908
Boyden street	Oct. 11, 1906	2,819 79	1,409 89	Dec. 7, 1908
Clement avenue	Aug. 9, 1906	2,837 47	1,418 73	Dec. 17, 1908
Bennington street	June 27, 1899	821,816 83	54,812 21	Aug. 27, 1908
		\$951,199 34	\$116,334 60	

The following payments were made for land damages and other claims on account of the laying out, widening, relocation and construction of streets and for sewerage works:

Highways, making of	\$71,688 00
Brandon street and Belgrade avenue	780 11
Hyde Park avenue	7,910 64
Sewerage works	13,634 96
	\$94,013 71

Acts of the Legislature provide that the Board of Street Commissioners, at the request of the Schoolhouse Commissioners, shall take, by purchase or otherwise, such lands for school purposes as the Schoolhouse Commission, with the approval of the Mayor, shall designate, etc., and that the damages sustained by any person under such taking shall be determined by agreement between said Board and said parties, etc. Under these acts the Board has taken during the year the following land:

LOCATION.	School.	From Whom Taken.	Date of Taking.
Cedar street, Roxbury.....	Dudley district.....	John Tetlow.....	July 21, 1908
Ferdinand, Fayette and Melrose streets.....	Winthrop district.....	Martha L. Reynolds.....	Sept. 16, 1908
		Bertha M. Eichler.	
		Heirs or devisees Sarah H. Hinneman.	
		Julia Regestein.	
		Lizzie G. Fenollosa.	
		Heirs Mary Ehrlein.	
		Edwin S. Drowne.	
		Jay W. Cofran.	
		Mary A. Kelley.	
		L. H. H. Johnson, Trustee.	
		Daniel Murphy.	
		John F. Kinney.	
		Charles S. Binner.	
		John Shea.	
		Anna W. Schneidt, Trustee.	
		Mary E. and William H Shea.	
		Emily F. Wilcomb.	
		S. and H. Ames, heirs.	
		F. C. Bowditch.	
		Boston & Albany Railroad.	
		Sophronia N. Herrick.	
		Lemuel Gulliver, heirs.	
		Helen L. Kenney.	
		Person or persons unknown	Aug. 27, 1908
Joy and South Russell streets.....	Phillips district.....	Rebecca B. Warren <i>et al.</i>	
		Heirs Ira Litchfield.	
		C. I. and H. E. Litchfield.	
		Mary A. Donovan.	
		Henry A. Halliday <i>et al.</i> , Trustees.	
		Rosa Jacobvitz.	
		D. J. and L. W. Puffer.....	Sept. 28, 1908
Walk Hill street.....	Francis Parkman district.....	Hills Land Trust.	
		John H. Moore.....	Dec. 7, 1908
Pleasant street.....	Edward Everett district.....	Frank' P. Appleton.	
		Henry F. Brady.....	Jan. 21, 1909
Grove street, West Roxbury.....	Robert G. Shaw district.....	Angie L. Peters.....	Jan. 21, 1909

Street Licenses.

The receipts for the year on account of licenses for the storage and sale of merchandise in public streets were \$19,695. This sum is somewhat disappointing to the Board. It is the result of a technical defect in the law under which such licenses are issued (chapter 584 of 1907), users of sidewalks for the storage of merchandise having found that they could not be prosecuted for such use under the penalty clause of the act. It was clearly a defeat of the intent of the law, and its effect was far-reaching. The question is, however, to be brought before the Legislature of this year, and the defect will doubtless be remedied.

With this exception the law continues to work well, and, under police direction, it has done much to relieve the congestion of streets and sidewalks, restoring to the people their rights in public thoroughfares and making it possible to travel more expeditiously on foot or by vehicle in the crowded parts of the city.

Street Traffic Regulations.

By chapter 447 of the Acts of the Legislature of 1908 the Board was required to make rules and regulations for governing vehicular traffic in the streets of the city. The question of such regulation had been agitated for many years, resulting in authority being given by the Legislature of 1907 to the Transit Commissioners of the City of Boston to investigate the subject and report its conclusions to the Legislature of 1908. The commissioners made an exhaustive report, which resulted in the passage of the act under which the Board of Street Commissioners drafted rules and regulations and which were put into effect on January 1 of this year.

The rules made a radical departure in the use of the streets of the city by vehicles of all descriptions, and though they have been in operation but one month they have brought about a marvelous change in the condition of the streets. The heart of the business district that before was badly congested during the busy hours of the day with blockades innumerable and chaos generally prevailing suddenly became open, and thereafter vehicles seemed to have no difficulty in freely passing through the streets. The making of a number of one-way streets in the retail district was a distinct departure in the matter of street traffic regulation in this city, but it seems to have resulted in the relieving of those streets of congestion, and at the same time making traffic

freer and easier in adjoining streets. The regulations have not been in operation long enough, however, to discuss at length their effect at this time.

EXPENDITURES.

Salaries and Other Expenses.

Salaries	\$66,886 42
Advertising	1,400 66
Printing	608 31
Stationery	780 03
Transportation	1,071 00
Telephone and messenger service	494 15
Surveyors' supplies, etc	559 09
Office fittings	401 50
Incidentals	3,231 88
Estimates	900 00

Public Lands.

Care tide gates, King's mill pond, one year,	\$100 00
Taxes, city of Everett	19 00
Taxes, town of Hull	49 76
Cleaning and repairing gates at King's mill pond	30 00
	198 76
	<u>\$76,531 80</u>

PUBLIC LANDS.

The following is a list of the real estate belonging to the city in charge of the Board of Street Commissioners:

City Proper.

Description.	Square Feet.
Albany street, land opposite East Brookline street, Rented for \$100 a year.	1,074

South Boston.

Gold street, land on southwest side, between A street and the N. Y., N. H. & H. R.R.	1,100
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Charlestown.

Rutherford avenue, land on northeast side	29,445
Occupied by city departments.	

Dorchester.

Gibson street, land on north side	59,833
28,599 square feet rented to Sewer Division of Street Department at \$400 a year.	
21,250 square feet rented to Boston Water Board at \$300 a year.	
King's mill pond, so-called, being that part of the bed of Tenean creek, or Smelt brook, between Mill, Exchange, Park and Adams streets and Neponset avenue, about	470,386
Southern avenue, land on south side, between Bernard and Elmhurst streets	4,335

West Roxbury.

Moreland street, land	30,421
Morton street, quarry	17,031

Brighton.

Western avenue, marsh northeast of Western ave- nue and northwest of North Harvard street,	10,890
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Islands, etc.

Great Brewster Island, Boston Harbor, about 16 acres.	
Apple Island, Boston Harbor, about 9½ acres.	
Summer and Pleasant streets, in town of Everett, old gravel pits	20,700

SURVEYING DIVISION.

The Surveying Division maintained practically the same force, engaged upon work similar in character to that of previous years.

No second hearings were held; but ten hearings were given under authority of the legislative act permitting changes to be made on plans showing proposed development which had been previously filed.

A part of the force was detailed upon this work, and during the year twenty-five plans showing such changes were prepared and filed.

Twenty-six new sectional plans, designed for the development of new territory, were also completed and filed. A detailed description of the projections shown on these plans can be found in a previous report.

The department was called upon during the year by the United States Engineer Corps stationed in this city to assist them in observing angles used in the verification of triangulation work done by them in connecting Nantasket, Blue Hill and Powder Horn.

It was found expedient to establish a new station at Nantasket, as the old point (a stone monument) is being so rapidly inclosed by building operations that in future it will be impossible to use it; consequently the new concrete water tower on Telegraph Hill at Fort Revere has been substituted, its position determined, and in the future it will be the station, and in many ways will be much superior to the old one.

A request was also received from the Engineering Department of the Metropolitan Park Commission for the determination of the position of Bunker Hill Monument, at Charlestown, to be used by them in connection with the work of that department in Middlesex Fells and vicinity. A result of these observations by this department has been furnished them.

In June a new station was established at Blue Hill. The old stone observatory which so long stood on Great Blue Hill, an object forming a part of the great triangulation system of the United States Coast and Geodetic Survey, also one of the primary points in the base of the triangulation system of this department, has been demolished, and in its place has been erected a new concrete tower whose position it became necessary to determine.

The flagstaff of this new tower was selected for observation and the position of the new tower determined.

The tower of the headquarters of the Municipal Fire Department building, on Bristol street, was occupied and its position determined; also that of the tower of the Christian Science Church at the junction of Falmouth street, St. Paul street and Norway street.

These two objects form exceptionally good stations and will be excellent for observations in connection with any future triangulation work in Boston Proper, the South Bay District or South Boston.

Plan 3.

On January 1, 1909, a hearing was given under authority of chapter 210 of the Acts of 1898, on section numbered W 33 and related particularly to the relocation of Assabet street northwesterly about 20 feet, the proposed southeasterly line being shown 180 feet distant from and parallel with the northwesterly line of King street; also to the relocation of Agawam street, the southeasterly line of which is shown 160 feet northwesterly from and parallel with the northwesterly line of Assabet street.

The time limit not having expired, the plan showing these changes has not yet been filed.

The following is a statement of the work done during the year:

Plan from actual survey of two sections, W 51 and W 70; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, W 68 and W 69; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of one section, W 71; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of one section, W 52; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, W 54 and W 67; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of one section, X 81; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of one section, W 53; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Six sectional plans of Sections W 51, W 52, W 68, W 69, W 70, W 71; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Completed with grades.)

These plans were approved by the Mayor and filed January 27, 1909, with the City Engineer.

In this territory of about 137.67 acres covered by the above plans there are comprised:

Public streets:

Number of streets	.	.	.	.	.	.	18
Length	.	.	.	.	16,540 ft.	=	3.13 miles
Area	.	.	.	.	685,000 sq. ft.	=	15.72 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets	.	.	.	.	.	.	40
Length	.	.	.	.	18,395 ft.	=	3.48 miles
Area	.	.	.	.	673,395 sq. ft.	=	15.45 acres

Totals:

Number of streets	.	.	.	.	.	.	54
Length	.	.	.	.	32,965 ft.	=	6.24 miles
Area	.	.	.	.	1,358,395 sq. ft.	=	31.17 acres

Percentage of above area absorbed by all streets, old and new, 22.65.

Plans and profiles completed showing the grades of the following streets:

Chelmsford street, from Adams street to Charlemont street.

Coffey street, from Neponset avenue to street No. 245.

Delmont street, from Adams street to Charlemont street.

Glide street, from Minot street to Oak avenue.

Newhall avenue, from Newhall street to Neponset avenue.

Newhall place, from Newhall avenue to Ashmont street.

Street No. 244, from Newhall street to Fairview street.

Street No. 245, from Adams street to Plain street.

In connection with the sectional and other plans enumerated above, the following work has been done:

Number of titles looked up	222
Number of conveyances copied	94
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	26
Number of deed tracings made	2

Plan 6.

The following is a statement of the work done during the year:

Plan from actual survey of three sections, Ee 13, Ee 27 and Ee 33; size, 13 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Ee 11 and Ee 12; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Ee 29 and Ee 30; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Ee 31 and Ee 32; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Five sectional plans of Sections X 91, X 93, Ee 8, Ee 9 and Ee 10; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.)

These plans were approved by the Mayor and filed January 27, 1909, with the City Engineer.

In this territory of about 114.80 acres covered by the above plans there are comprised:

Public streets:

Number of streets	4
Length	6,470 ft. = 1.23 miles
Area	471,740 sq. ft. = 10.83 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets	31
Length	20,460 ft. = 3.87 miles
Area	807,160 sq. ft. = 18.52 acres

Totals:

Number of streets	33
Length	25,350 ft. = 4.81 miles
Area	1,278,900 sq. ft. = 29.35 acres

Percentage of above area absorbed by all streets, old and new, 25.56.

Plans and profiles completed showing the grades of the following streets:

Alabama street, from Almont street to Messinger street.
Astoria street, from Norfolk street to street No. 2037.
Chester street, from Blue Hill avenue to Oakland street.
Colorado street, from Almont street to Messinger street.
Crossman street, from Norfolk street to West Selden street.
Currier street, from Itasca street to Alabama street.
Delhi street, from Norfolk street to street No. 533.
Hersey street, from Orlando street to Haven avenue.
Itasca street, from Almont street to Messinger street.
Lawrence road, from Blue Hill avenue to Norfolk street.
Mildred street, from Norfolk street to street No. 2037.
Monterey avenue, from Almont street to Oakland street.
Fremont street, from Norfolk street to River street.
Fremont place, from Fremont street to Cook court.
Oakland street, from Oakland street to Blue Hill avenue.
Rockdale street, from Oakland street to Randolph road.
Rosewood street, from Oakland street to Randolph road.
Rockway street, from Rockville street to Chester street.
Savannah street, from Almont street to Messinger street.
Street No. 513, from Fremont street to Cook street.
Street No. 1653, from River street to Hollingsworth street.
Street No. 2306, from Norfolk street to Blue Hill avenue.
Street No. 2035, from Almont street to Hersey street.
Street No. 2036, from Almont street to Hersey street.
Street No. 2037, from Norfolk street to Astoria street.
Street No. 2038, from Almont street to Astoria street.
Street No. 2302, from Orlando street to street No. 2035.
Street No. 2400, from Blue Hill avenue to Rockville street.
Street No. 2401, from Blue Hill avenue to Rockville street.
Street No. 2402, from Norfolk street to River street.
Street No. 2403, from Norfolk street to River street.
Street No. 2404, from Norfolk street to Cook street.

Grade Plan Ee 1, showing Sections Ee 9 and Ee 10 completed. (In progress.)

Grade Plan Ee 2, showing Sections Ee 8 completed. (In progress.)

Grade Plan X 18, showing Section X 93 completed. (In progress.)

In connection with the sectional and other plans enumerated above the following work has been done:

Number of titles looked up	787
Number of conveyances copied	577
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	93
Number of deed tracings made	10

Plan 8.

On December 13, 1907, two hearings were given under authority of chapter 210 of the Acts of the Legislature of 1898, the first being on territory shown on Section O 63, representing a portion of Brighton, relating particularly to the part lying at the junction of Selkirk road and Kilsyth road, showing a taking of 231 square feet from the southerly corner of Selkirk road, by the substitution of a curve of 45-foot radius, instead of a curve of 20-foot radius.

The changes were made in accordance with the proposition and the plan was refiled February 27, 1908.

On December 13, 1907, a hearing was held under authority of chapter 210 of the Acts of the Legislature of 1898 on Sections numbered N 29, N 30, N 31 and N 32, representing a portion of Brighton, bounded approximately by Brighton avenue, Harvard avenue, Commonwealth avenue and Allston street, and was in relation to the elimination of street No. 395, running from street No. 390 to street No. 392, from a point about 500 feet from Brighton avenue to street No. 391, and the substitution therefor of streets No. 396 and No. 2388; the relocation of street No. 396 from street No. 394 to Commonwealth avenue; and a slight extension southeasterly of street No. 397 to conform to these changes.

Changes were made in accordance with the petition on N 29, N 30 and N 32, and the plans were refiled March 26, 1908.

On June 12, 1908, a hearing was given under authority of chapter 210 of the Acts of the Legislature of 1898, shown on Sections O 42, O 43, O 44, O 45, O 56, O 57, O 58, O 59, O 62, O 63, O 64 and O 65, on a territory bounded approximately by Commonwealth avenue, Chestnut Hill avenue, Union street and Washington street, and was in relation to the elimination of the portion of street No. 455 (Wallingford road) from Melton road to Chestnut Hill avenue; the relocation of street No. 827 and a proposed extension of it southwesterly from street No. 828 to Chiswick road; a proposed extension of Lothian road (street No. 2399) from Chiswick road to street No. 828; the introduction of street No. 2398 from Chestnut Hill avenue southeasterly to Wallingford road at a point opposite Leamington road; the relocation of street No. 826 from street No. 827 to Wallingford road; the introduction of

street No. 2396 from street No. 826 running northeasterly to Union street; the elimination of a portion of street No. 824 (Colonial road) from Milton road to Chestnut Hill avenue; and the introduction of street No. 2395, which is designed to leave Union street from a point distant from Chestnut Hill avenue about 220 feet and to run southwesterly to street No. 2397.

The changes were made in green on Sections O 44, O 45, O 56, O 57, O 58, O 64 and O 65, which were refiled in accordance with the petition, January 27, 1909.

On January 1, 1909, a hearing was given, under authority of chapter 210 of the Acts of the Legislature of 1898, on territory shown on Sections N 29, N 30, N 31 and N 32, bounded approximately by Harvard avenue, Commonwealth avenue, Allston street and Brighton avenue, and was in relation to the elimination of the portion of street No. 396 (Radcliffe road) from Princeton avenue to Commonwealth avenue and the substitution therefor of street No. 2416, located 75 feet southwesterly from and parallel with the present northeasterly line of street No. 396; also in relation to the revision of the grades for Princeton avenue and Princeton avenue extension, and for streets Nos. 396, 397, 398 (Allston square), streets Nos. 394, 404 and 426.

The time limit not having expired, the plans showing these changes have not yet been filed.

The following is a statement of the work done during the year:

Nine sectional plans of Sections G 72, G 89, G 90, G 91, G 92, G 93, N 8, N 9 and N 10; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.)

These plans were approved by the Mayor and filed January 27, 1909, with the City Engineer.

In this territory of about 211.88 acres covered by the above plans there are comprised:

Public streets:

Number of streets	33
Length	26,130 ft. = 4.95 miles
Area	1,117,780 sq. ft. = 25.66 acres

New streets established, private streets adopted and public streets [proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets	41
Length	20,285 ft. = 3.83 miles
Area	686,275 sq. ft. = 15.74 acres

Totals:

Number of streets	71
Length	42,955 ft. = 8.13 miles
Area	1,804,055 sq. ft. = 41.40 acres

Percentage of above area absorbed by all streets, old and new, 19.54.

Plan 10.

On July 24, 1908, a hearing was held, under authority of chapter 210 of the Acts of the Legislature of 1898, on sections numbered Cc 35, Cc 36, Cc 46 and Cc 55, on a territory bounded approximately by Washington street, Grove street, Board of Survey street No. 740 and Board of Survey street No. 611, and was in relation to the elimination of streets Nos. 743 and 744, running from Washington street to street No. 740; and of streets Nos. 745 and 746, running from Washington street to Grove street, all being shown at a width of 50 feet; and the substitution therefor of three 40-foot streets, one numbered as No. 2410, designed to run from Washington street to street No. 740, and two numbered as streets Nos. 2411 and 2412, which will extend from Washington street to Grove street.

The plans showing these changes have not yet been filed.

The following is a statement of the work done during the year:

Plan from actual survey of two sections, Y 88 and Y 93; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Y 89 and Y 92; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Y 95 and Dd 6; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Y 87 and Y 94; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, Dd 8 and Dd 9; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Three sectional plans of Sections Y 90, Y 96 and Dd 5; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.)

These plans were approved by the Mayor and filed January 27, 1909, with the City Engineer.

In this territory of about 48.21 acres covered by the above plans there are comprised:

Public streets:

Number of streets	.	.	.	.	.	.	9
Length	.	.	.	.	.	5,120 ft.	= .97 miles
Area	.	.	.	.	.	230,590 sq. ft.	= 5.29 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets	.	.	.	.	.	.	23
Length	.	.	.	.	.	12,915 ft.	= 2.44 miles
Area	.	.	.	.	.	503,270 sq. ft.	= 11.55 acres

Totals:

Number of streets	.	.	.	.	.	.	29
Length	.	.	.	.	.	17,745 ft.	= 3.36 miles
Area	.	.	.	.	.	726,030 sq. ft.	= 16.66 acres

Percentage of above area absorbed by all streets, old and new, 34.53.

Plans and profiles completed showing the grades of the following streets:

- Canterbury street, from Poplar street to Seymour street.
- Clarendon avenue, from Augustus street to Poplar street.
- Clarendon park, from Poplar street to Metropolitan avenue.
- Clifford street, from Canterbury street to Grew avenue.
- Grew avenue, from Canterbury street to Hyde Park line.
- Hemman street, from Summit street to Kittredge street.
- Hilburn street, from Poplar street to Cornell street.
- Mansur street, from Metropolitan avenue to Hyde Park line.
- Metropolitan avenue, from Summit street to Hyde Park line.
- Perkins street, from Canterbury street to Grew avenue.
- Poplar street, from Brown avenue to Dale street.
- Vista street, from Augustus street to Summit street.
- Street No. 2355, from Metropolitan avenue to Kittredge street.
- Street No. 2360, from Clarendon avenue to Cross street.
- Street No. 2362, from Clarendon avenue to Poplar street.
- Street No. 2363, from Clarendon avenue to street No. 2362.
- Street No. 2364, from Clarendon avenue to Poplar street.
- Street No. 2365, from Clarendon avenue to Poplar street.
- Street No. 2367, from Mansur street to street No. 2368.
- Street No. 2368, from Mansur street to Poplar street.

In connection with the sectional plans and other work enumerated above, the following work has been done:

Number of titles looked up	852
Number of conveyances copied	603
Number of plans copied from Suffolk and Norfolk Regis- tries and elsewhere	76
Number of deed tracings made	9

Plan 13.

On May 8, 1908, a hearing was held, under authority of chapter 210 of the Acts of the Legislature of 1898, on sections numbered X 27, X 28, X 33 and X 34, on a territory bounded approximately by Austin street, Canterbury street, Blue Hill avenue and Harvard street, and was in relation to the introduction of an additional street to the development; shown as leaving Harvard street at a point about 90 feet northwesterly from Austin street, and designed to run southwesterly parallel with and 80 feet distant northeasterly from Austin street for a distance of about 650 feet, where a turning place is provided, no connections through to any other highway being shown; the plan shown at the hearing also provided for the elimination of portions of street No. 1743 (Sturtevant street) and street No. 2092 (Gallagher street) from Austin street northwesterly for a distance of about 200 feet.

The above territory falls partly within the limits of Plan 5, but for convenience it is included in the description of the work under Plan 13.

The plans showing these changes have not yet been filed.

The following is a statement of the work done during the year:

Plan from actual survey of three sections, T 31, T 50 and T 51; size, 13 feet by 5 feet; scale, $\frac{1}{250}$. (Completed.)

Plan from actual survey of two sections, S 21 and S 40; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, S 41 and S 60; size, 10 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Three sectional plans of Sections T 31, T 50 and T 51; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.)

These plans were approved by the Mayor and filed January 27, 1909, with the City Engineer.

In this territory of about 68.88 acres covered by the above plans there are comprised:

Public streets:

Number of streets	17
Length	11,510 ft. = 2.18 miles
Area	608,350 sq. ft. = 13.96 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets	.	.	.	.	.	.	18
Length	.	.	.	.	.	7,750 ft.	= 1.46 miles
Area	.	.	.	.	.	247,650 sq. ft.	= 5.66 acres

Totals:

Number of streets	.	.	.	.	.	.	32
Length	.	.	.	.	.	17,240 ft.	= 3.36 miles
Area	.	.	.	.	.	856,000 sq. ft.	= 19.62 acres

Percentage of above area absorbed by all streets, old and new, 28.48.

In connection with the sectional and other plans enumerated above, the following work has been done:

Number of titles looked up	.	.	.	.	.	.	948
Number of conveyances copied	.	.	.	.	.	.	751
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	.	.	.	.	.	.	148
Number of deed tracings made	.	.	.	.	.	.	6

ADDITIONAL HEARINGS.

The following is a list of additional hearings on changes made, or proposed to be made, on filed plans, under authority of chapter 210 of the Acts of the Legislature of 1898, and subsequent legislative authority.

Plan 4.

On August 11, 1899, a hearing was held on section numbered M 67, on territory bounded approximately by Huntington avenue, Gainsborough street, St. Stephen street and Bryant street, and was in relation to the discontinuance of street No. 236 from Huntington avenue to St. Stephen street extension, and the substitution therefor of a new street (Opera place) located about 438 feet northeasterly from Bryant street and also running from Huntington avenue to St. Stephen street.

The changes were made on M 67, which was refiled August 28, 1908.

Plan 5.

On July 22, 1904, a hearing was held on sections numbered X 18, X 19, X 20, X 21, X 22 and X 23, on territory bounded approximately by Washington street, Bowdoin street, West-

ville street, Geneva avenue, Dorchester avenue and Melville avenue, and was primarily in relation to the substitution of Claybourne street for a portion of street No. 230; but the hearing was also for the purpose of introducing into the development Dakota street, extended from Greenbrier street to Washington street; a street leading from Melville avenue to Park street, called Wellesley park; the introduction of Chalmers street from Geneva avenue to Freeman street; and the substitution of Alpha road for street No. 284 and for a portion of street No. 238.

The changes were shown in green on X 18 in relation to Claybourne street and Dakota street, and the plan was refiled September 30, 1904.

The changes were shown in green on X 21 in relation to Wellesley park, and the plan was refiled October 5, 1908.

On May 1, 1908, a hearing was given on sections numbered X 36 and X 45, on territory lying at the junction of Talbot avenue and Bernard street, and was in relation to a proposed extension of street No. 1601 from the curve in same south-westerly in a direct line to Franklin Field; also the elimination of the portion running northeasterly to Talbot avenue, and the substitution therefor of street No. 2390, 30 feet wide, which is designed to run along the easterly line of Franklin Field, from Talbot avenue to street No. 1601 extended; and the introduction of street No. 2391, projected to run parallel with and 160 feet from street No. 2390, from Talbot avenue to street No. 1601.

The plans showing these changes have not yet been filed.

On June 12, 1908, a hearing was held on sections numbered X 53, X 54, X 67 and X 68, on a territory bounded approximately by Blue Hill avenue, Callender street, Don street, Willowwood street, Norfolk street and Morton street, and was in relation to the elimination of the portion of street No. 1079 lying between Blue Hill avenue and Ashton street, and the introduction of three 40-foot streets, known as Balsam street, Arbutus street and Columbine street, running from Blue Hill avenue to street No. 933 (Ashton street).

Authority to open these streets had previously been given to the owners of the property by the Street Commissioners on April 5, 1907.

The changes were made on Sections X 53 and X 54, and the plans were refiled in accordance with the petition on January 27, 1909.

On November 13, 1908, a hearing was held on sections numbered X 52, X 53, X 68 and X 69, on a territory bounded approximately by Johnston road, Blue Hill avenue, Morton

street and Harvard street, and was in relation to the relocation of street No. 931 (Rhodes street) distant about 10 feet northwesterly from and parallel with its present location; the relocation of street No. 929 (Baird street) distant about 40 feet northwesterly from and parallel with its present location; the elimination of street No. 928 and the substitution therefor of street No. 2415 (Havelock street), distant 160 feet northwesterly from and parallel with Baird street (No. 929); and the introduction of street No. 2414 (Wilcock street), distant 160 feet northwesterly from and parallel with street No. 2415 (Havelock street); all the above mentioned ways extending from Blue Hill avenue to Morton street.

The above territory falls partly within the limits of Plan 12, but for convenience it is included in the description of the work under Plan 5.

The changes were made on Sections X 52, X 53 and X 69 and new plan made of X 68, and were refiled January 27, 1909.

Plan 7.

On January 24, 1908, a hearing was held on sections numbered U 9 and U 12, and was in relation to the introduction of Alcon street, 35 feet wide, leading from Dorchester avenue to Boston street.

The changes were made on Section U 9, which was refiled April 28, 1908.

On October 9, 1908, a hearing was held on section numbered M 98 on territory in that part of Boston formerly Roxbury, upon Alther street, and was in relation to the elimination of the portion of street No. 729 from Hampden street to Reading street and the substitution therefor of Maiden lane (Alther street).

The change was made on M 98 and the plan was refiled on January 27, 1909.

Plan 14.

On May 10, 1907, a hearing was held on territory shown on sections numbered T 100, X 1, U 91 and W 10, and was in relation to the relocation of street No. 964 (Longfellow street), between Draper street and Robinson street, its relocation being shown southerly of and about 14 feet parallel with its present proposed location, and to be called Bentham road.

The changes were made in accordance with the petition, and T 100, X 1, U 91 and W 10 were refiled April 28, 1908.

On August 28, 1908, a hearing was held on sections numbered T 85, T 95 and T 96, on a territory bounded approximately by Blue Hill avenue, Washington street, Erie street and Elmo street, and was in relation to the relocation of that portion of street No. 1190 (Wilder road extension) from Columbia road to Glenarm street; its location being shown about 50 feet southwesterly of and parallel with its filed location and called Powellton road.

A new plan of T 96 was made in accordance with the petition, and the plan was refiled January 27, 1909, and substituted for the old one.

SUMMARY OF WORK DURING THE YEAR.

Sectional plans prepared for filing during the year, 26: Sections G 72, G 89, G 90, G 91, G 92, G 93, N 8, N 9, N 10, T 31, T 50, T 51, W 51, W 52, W 68, W 69, W 70, W 71, X 91, X 93, Y 90, Y 96, Dd 5, Ee 8, Ee 9, Ee 10.

Territory covered by above plans . . . 581.44 acres

Public streets:

Number of streets		81
Length	 65,770 ft.	= 12.46 miles
Area	 3,113,460 sq. ft.	= 71.46 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets		153
Length	 79,805 ft.	= 15.08 miles
Area	 2,917,750 sq. ft.	= 66.92 acres

Totals:

Number of streets		219
Length	 136,255 ft.	= 25.90 miles
Area	 6,023,380 sq. ft.	= 138.20 acres

Percentage of area of above territory absorbed by all streets, old and new, 26.15.

Plans from actual survey completed:

Number		13
Number of sections comprised		26
Area of sections comprised		535.11 acres
Scale		$\frac{1}{250}$

Plans from actual survey in progress:

Number	6
Number of sections comprised	9
Area of sections comprised	207 acres
Scale	$\frac{1}{250}$

Plans and profiles showing grades completed:

Number of streets	60
Scale	$\frac{1}{250}$ and $\frac{1}{50}$

In connection with the sectional and other plans enumerated above, completed and in progress, the following work has been done:

Number of titles looked up	2,809
Number of conveyances copied	2,130
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	343
Deed reference tracings made	27
Number of stone monuments set	40

Summary of surveying work done under chapter 323 of the Acts of 1891, and chapter 393 of the Acts of 1906, to February 1, 1909:

Preliminary plans completed:

Number	14
Numbers	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14
Area	20,621 acres
Sizes, 11 ft. 6 in. by 8 ft. 9 in.; 12 ft. 3 in. by 5 ft.; 14 ft. by 10 ft.; 16 ft. 6 in. by 10 ft.; 10 ft. by 8 ft.; 9 ft. by 5 ft.; 11 ft. by 10 ft.; 20 ft. by 10 ft.; 8 ft. 6 in. by 7 ft.; 17 ft. by 10 ft.; 20 ft. by 10 ft.; 18 ft. by 10 ft.; 15 ft. 6 in. by 10 ft.; and 16 ft. 6 in. by 10 ft. Scale, 50 ft. to an inch and $\frac{1}{1000}$.	

Public streets:

Number of streets	811
Length	1,167,631 ft. = 221.14 miles

Private streets:

Number of streets	1,012
Length	501,401 ft. = 94.96 miles

Estates:

Number of estates	22,094
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Working plans completed:

Number	.	.	.	.	.	.	.	.	.	1
Size	.	.	.	.	.	.	.	.	.	16 ft. by 7 ft.
Scale	.	.	.	.	.	.	.	.	.	50 ft. to an inch

Plans from actual survey completed:

Number	.	.	.	.	.	.	.	.	.	350
Number of sections	.	.	.	.	.	.	.	.	.	387
Area of sections comprised	.	.	.	.	.	.	.	.	.	3,088.77 acres
Scale	.	.	.	.	.	.	.	.	.	$\frac{1}{250}$

Plans from actual survey completed of territory:

Number	.	.	.	.	.	.	.	.	.	6
Number of sections comprised	.	.	.	.	.	.	.	.	.	90
Area of sections comprised	.	.	.	.	.	.	.	.	.	1,681.00 acres
Scale	.	.	.	.	.	.	.	.	.	$\frac{1}{1000}$

Sectional plans completed, approved and filed:

Number of plans	.	.	.	.	.	.	.	.	.	626
Size of each	.	.	.	.	.	.	.	.	.	4 ft. by 4 ft.
Scale	.	.	.	.	.	.	.	.	.	$\frac{1}{250}$

Territory covered by plans:

Area	.	.	.	.	.	.	.	.	.	12,612.14 acres
------	---	---	---	---	---	---	---	---	---	-----------------

Public streets:

Number of streets	.	.	.	.	.	.	.	.	.	582
Length	.	.	.	.	.	.	.	.	.	884,125 ft. = 168.43 miles
Area	.	.	.	.	.	.	.	.	.	44,769,752 sq. ft. = 1,027.67 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891, and 393 of the Acts of 1906:

Number of streets	.	.	.	.	.	.	.	.	.	1,863
Length	.	.	.	.	.	.	.	.	.	1,734,719 ft. = 423.91 miles
Area	.	.	.	.	.	.	.	.	.	69,868,728 sq. ft. = 1,603.92 acres

Totals:

Number of streets	.	.	.	.	.	.	.	.	.	2,445
Length	.	.	.	.	.	.	.	.	.	2,364,232 ft. = 440.71 miles
Area	.	.	.	.	.	.	.	.	.	614,058,960 sq. ft. = 2,631.42 acres

Percentage of area of above territory absorbed by all streets, old and new, 24.82.

Plans and profiles showing grades completed:

Number of streets	1,935
Scale, $\frac{1}{250}$ and $\frac{1}{50}$ and 40 feet to an inch, and 5 feet to an inch.	

Plans showing system of triangulation, bearings and distance:

Number of plans	1
Scale	$\frac{1}{10000}$

Plans showing cuts to and from triangular points completed:

Number of plans	78
Scale	natural scale

Plans showing cuts to and from triangulation points in progress:

Number of plans	48
Scale	natural scale

Conveyances copied and titles looked up:

Number	54,733
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Plans copied from Suffolk and Norfolk Registries and elsewhere:

Number	6,616
Deed reference tracings made	351

Stone monuments set in districts covered by Plans 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14 for use in determination of position and location of street lines:

Number of monuments	669
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Miscellaneous work includes tracings, estimates of areas by calculations, planimeter, etc., sketches and studies of different plats, etc.

LIST OF PLANS.

SURVEYING DIVISION, IN STREET LAYING-OUT DEPARTMENT, JANUARY 31, 1909.

ROOMS 23 TO 27, INCLUSIVE, OLD COURT HOUSE.

Indexed.	Classification.	Number of Plans.
On Wall, Room 27.	Preliminary Plan 1 Back Bay Fens.....	1
“ “ “ 24.	“ “ 2 Back Bay.....	1
“ “ “ 27.	“ “ 3 Neponset.....	1
“ Frame “ 27.	“ “ 4 Back Bay.....	1
“ Wall “ 26.	“ “ 5 Central Dorchester.....	1
“ “ “ 23.	“ “ 6 Lower Mills and Mattapan.....	1
“ “ “ 27.	“ “ 7 South Bay.....	1
“ Frame “ 25.	“ “ 8 Brighton.....	1
“ Wall “ 27.	“ “ 9 Part of Roxbury.....	1
“ Frame “ 27.	“ “ 10 “ “ West Roxbury.....	1
“ “ “ 25.	“ “ 11 “ “ “ “.....	1
“ “ “ 27.	“ “ 12 “ “ “ “.....	1
“ “ “ 27.	“ “ 13 “ “ Roxbury and West Roxbury.....	1
“ Wall “ 25.	“ “ 14 Grove Hall and Meeting House Hill.....	1
Vol. A.....	Miscellaneous plans of estates. Plans 1 and 2.....	179
Vol. B.....	“ “ “ “ “ 3 “ 5.....	310
Vol. C{Part 1.....	“ “ “ “ “ 4, 9 and 8.....	249
Vol. C{Part 2.....	“ “ “ “ “ 4, 9 “ 8.....	327
Vol. D{Part 1.....	“ “ “ “ “ 10.....	208
Vol. D{Part 2.....	“ “ “ “ “ 10.....	206
Vol. E{Part 1.....	“ “ “ “ “ 12, 13 and 14....	252
Vol. E{Part 2.....	“ “ “ “ “ 12, 13 “ 14....	364
Vol. F.....	“ “ “ “ “ 12, 13 “ 14....	239
Vol. G{Part 1.....	“ “ “ “ “ 5, 6 “ 12....	288
Vol. G{Part 2.....	“ “ “ “ “ 5, 6 “ 12....	244
Vol. H.....	“ “ “ “ “ 8.....	265
Vol. I.....	“ “ “ “ “ 13.....	144
Vol. J.....	“ “ “ “ “ 6 and 12.....	304
Vol. K.....	“ “ “ “ “ 7.....	279
Vol. L.....	“ “ “ “ “ 14.....	202
Vol. M.....	“ “ “ “	110
Vol. N.....	“ “ “ “	140
	Carried forward.....	4,324

LIST OF PLANS. — *Continued.*

Indexed.	Classification.	Number of Plans.
	<i>Brought forward</i>	4,324
Vol. O.....	Miscellaneous plans of estate.....	77
Vol. I.....	Deed tracings.....	173
Vol. II.....	“ “	228
Vol. III.....	“ “	150
Vol. IV.....	“ “	87
Vol. V.....	“ “	22
Vol. VI.....	“ “	101
Vol. VII.....	“ “	32
Vol. VIII.....	“ “	69
Case A.....	Miscellaneous plans, studies, etc.....	50
Case E.....	Plans of streets approved by Street Commissioners in Roxbury.....	79
“ “	Plans of streets approved by Street Commissioners in Dorchester.....	241
“ “	Plans of streets approved by Street Commissioners in West Roxbury.....	129
“ “	Plans of streets approved by Street Commissioners in Brighton	65
“ “	Plans of streets approved by Street Commissioners in Charlestown.....	2
“ “	Plans of streets approved by Street Commissioners in City Proper.....	4
“ “	Plans of streets approved by Street Commissioners in South Boston.....	18
“ “	Plans of streets approved by Street Commissioners in East Boston.....	13
Case DD.....	Miscellaneous plans, estates, etc.....	60
Case EE.....	Miscellaneous deed plans, South Bay.....	76
	<i>Plans from Actual Survey.</i>	
	Sections. Sections. Sections.	
	T 19, 20—U 11, 12 U 9, 10—T 1, 2	2
	L 89, 90—M 81, 82, 83 L 91, 92—M 98, 99, 100	2
	S 4, 17 S 16, 25 S 24, 37	3
	S 18, 23 S 19, 22 S 36, 45	3
Case GG.....	U 28, 33 S 38, 43 S 44, 57	3
	T 3, 8 U 8, 13 U 29, 32	3
	T 40 T 21, 22 T 38, 39	3
	S 56 O 45 O 24	3
	F 82, 83, 84 F 98—O 3 F 96, 97	3
	F 99, 100 F 78, 79, 80 O 1, 2	3
	<i>Carried forward</i>	6,028

LIST OF PLANS.—Continued.

Indexed.	Classification.			Number of Plans.
	<i>Brought forward</i>			6,028
	<i>Plans from Actual Survey.</i>			
	Sections.	Sections.	Sections.	
	G 47, 48, 49	G 52, 53	G 69, 70	3
	G 71, 72	G 90—F 81	G 91—N 10	3
	G 89, 92	F 78, 79, 80	F 82, 83, 84	3
	X 91, Ee 10	Ee 9	X 93, Ee 8	3
	<i>Refiled Plans.</i>			
Case GG.....	M 88, 99, 100	M 71, 82	S 19	3
	S 18	U 8		2
	Plats of Plan 7, scale, $\frac{1}{1000}$			2
	Index to " " " "			1
	Plat of Plan 13, " "			1
	<i>Plans from Actual Survey.</i>			
	Ee 1, Ff 10	Ee 20, Ff 11	Ee 21, Ff 30	3
	Ff 8, 13	Ff 9, 12, 29	Cc 1, Dd 10	3
	W 65, 76, 85	W 72, 89, 92	W 73, 74, 75	3
	W 86, 87, 88	W 90, 91	W 93, 94, 95,96	3
	M 46, 47, 48	M 53, 54, 55	Z 61, 80	3
	Z 62, 63	Z 64, 77	Z 76, 85	3
	Z 78, 79	Z 81, 100	Z 82, 99	3
	Z 83, 98	Z 84, 97	Ee 20, Ff 11	3
	Y 90, 91	Cc 1, Dd 10	Cc 2, 3	3
Case HH.....	Z 47, 54	Ee 13, 27, 33	Ee 29	3
	Plat of Plan 10, scale, $\frac{1}{1000}$			1
	" " " 13 and 14, seale, $\frac{1}{1000}$			1
	" " Parkway, taking Plan 10.....			1
	T 31, 50, 51	T 47, 48	T 63, 64	3
	T 53, 54	T 55, 66	T 77, 78	3
	T 32, 49	T 52, 69	T 65, 76	3
	T 95, 96	T 84, 85	T 74, 78, 88	3
	T 67, 68	T 72, 73	T 75, 86	3
	T 70, 71	T 33, 34		2
Case JJ.....	Miscellaneous plans, estates and deeds.....			170
	O 94, 95, 96, 97, R 6		X—17	2
Case KK.....	W 55, 66	X 19, 20	S 61, 80	3
	X 21, 22	X 18, 23, 38	S 81, 100	3
	<i>Carried forward</i>			6,277

LIST OF PLANS. — *Continued.*

Indexed.	Classification.	Number of Plans.
	<i>Brought forward</i>	6,277
	<i>Plans from Actual Survey.</i>	
	Miscellaneous plans, estates, etc	10
	Triangulation plat, scale, $\frac{1}{1000}$	1
	Plans on natural scale showing triangulation points, size, 2 feet by 2 feet	86
	Plats of Plan 8, scale, $\frac{1}{1000}$	4
	M 31 (part), 32 (part), 33 (part), 41 (part), 48, 49, 50, 51 (part), 60 (part)	1
	M 52, 53, 70, 51 (part), 60 (part)	1
	M 28, 29, 30, 31 (part), 32 (part), 33 (part) } N 21, 22, 23, 39, 40, 41 (part), 42 }	1
	Sections. Sections. Sections.	
Case KK	M 66, 75, 86 M 67, 74, 87	2
	Plan 4, scale, $\frac{1}{1000}$ Y 98, 99, 100	2
	Dd 18, 19, 20 Dd 21, 22, Ee 30	2
	Ee 9, 10 Ee 11, 12 T 31, 50, 51	3
	Plan 6—12, two parts	2
	X 91, 92 Y 81, 82, X 90 S 21, 40	3
	Dd 1, 2, 3 Dd 40, Ee 31, 32 S 41, 60	3
	G 65, 66 G 67, 68 G 75, 76	3
	G 73, 74 G 85, 86 G 54	3
	G 93, 94 G 87, 88 G 95, 96	3
	Back Bay Park and vicinity	1
	M 67 M 68, 69 M 70, N 61, 62, 63	3
	M 71, 72, 73 M 89, 90 N 5, 6, 7	3
	N 11, 12 N 13, 14 N 15, 16, 17	3
	N 23, 24 N 25, 26 N 27, 28, 29	3
	O 40, N 31, 32, 33 N 59, 60 N 78, 79, 80	3
	N 81, 82, 83 O 1, N 10 O 17, 18	3
	O 19, 20 O 23, 24 N 30, O 21, 22	3
Case LL	O 27, 28 O 29, 30 O 31, 32	3
	O 33, 34 O 35, 36 O 37, 38	3
	O 39, 40 N 50, O 41 O 42, 43	3
	O 44, 45 O 46, 47 O 48, 49, 50	3
	O 52 O 53, 54 O 55, 56	3
	O 57, 78 N 51, O 59, 60 O 61, 62, 63	3
	O 64, 65 O 66, 67 O 68, 69	3
	O 73, 74 O 75, 76 O 77, 78	3
	<i>Carried forward</i>	6,453

LIST OF PLANS. — *Continued.*

Indexed.	Classification.			Number of Plans.
	<i>Brought forward</i>			6,453
	<i>Plans from Actual Survey.</i>			
	Sections.	Sections.	Sections.	
Case LL.	O 83, 84, 85	O 87, 88	O 92, 93, 72, 89	3
	O 8, 9, 10	O 11, 12	O 6, 7	3
	O 15, 16	O 13, 14	O 25, 26	3
	O 4, 5	F 92, 93, 94, 95	N 8, 9	3
	<i>Refiled Plans.</i>			
	O 83, 84, 85	O 87, 88, 89, 92, 93		2
	O 94, 95, 96, 97, R 6	N 32		2
	X 73, 68	Ee 3, 18, 23, X 83, 98		2
	X 84, 97, Ee 4, 17	X 86, 95, Ee 6, 15, 26		2
	X 69, 72 — X 67, 74	X 87, 94, Ee 7, 14, 27		3
	X 32, 49, 52	X 85, 96, Ee 5, 16, 25		2
	Ee 2, 19, X 82, 99	X 30, 31 — X 48, 53		3
	X 44, 57	X 50, 51	X 46, 55	3
	X 66, 75	X 65, 76	X 45, 56	3
	<i>Plans from Actual Survey.</i>			
	X 88, 89	X 70, 71	X 81, 100	3
	Y 21, 40	Y 41, 60	Y 61, 80	3
	X 34, 35, 36	X 64, 67	X 37, 38	3
	X 39, 40	X 41, 60	X 42, 50	3
Case MM.	X 43, 58	X 47, 54	X 61, 80	3
	X 62, 79	X 63, 78	X 28, 33	3
	X 16, 25	X 5, 6, 7	X 92, Ee 9	3
	X 3, 4	T 78, 83	T 97, 98	3
	W 68, 69	W 71, 81	W 51, 70	3
	W 54, 67	W 52, 53		2
	<i>Refiled Plans.</i>			
	X 82, 99	X 83, 98	X 84, 97	3
	X 85, 96	X 14, 27	X 15, 26	3
	X 90, 91	X 92, Ee 9	X 87, 74	3
	X 73			1
	Index Plans — Plan 6, scale, $\frac{1}{1000}$			1
	" "	" 3, "	.....	1
	" "	" 5, "	.....	1
	" "	" 14, "	.....	1
	<i>Carried forward</i>			6,530

LIST OF PLANS. — *Continued.*

Indexed.	Classification.			Number of Plans.
	<i>Brought forward</i>			6,530
	<i>Plans from Actual Survey.</i>			
Case MM.....	Contour plan of Wellington Hill.....			1
	Miscellaneous rolled plans of estates.....			31
	Sections.	Sections.	Sections.	
	W 33, 48	W 34, 47	W 49, 50	3
	Cc 3, 18	Cc 4, 17	Cc 5, 16	3
	Cc 14, 27, 34	Cc 19	Cc 24, 37	3
	Cc 25, 36	Cc 26, 35	Cc 45	3
	Cc 46, 55	Cc 6, 15	Cc 23	3
	Z 85, 96	Z 86, 95	Z 94, Cc 7	3
	Z 71, 90	Z 72, 89	Z 68, 73	3
	Z 88, 93	Cc 47, 54	Cc 67, 74	3
	Cc 66, 75	Cc 8, 13	Cc 28, 33	3
	Cc 48, 53, 68	Cc 11, 12	Cc 29, 30	3
	Cc 31, 32	Cc 49	Cc 9, 10	3
	Z 24, 37	Z 48, 53	Z 25, 36	3
	Z 49, 52	Z 29, 32	Z 30, 31	3
	Z 44, 57	Z 35, 46	Z 47, 54	3
	Z 67, 74	Z 45, 56	Z 69	3
Case NN.....	Y 49, 52	Y 27, 28	Y 50, 51	3
	Y 30, 31	Y 29, 32	Y 33	3
	Z 18, 23, 38	Z 41, 60	Z 87	3
	Z 2, 19, 22	Z 50, 51	Z 42, 59	3
	Z 55	Z 39, 40	Z 20, 21	3
	Y 34, 47	Z 65, 66	Z 75	3
	Y 48, 53	Y 69, 72	Z 71	3
	Z 91	Y 70	Y 36, 97	3
	Z 92	Aa 81, 82	Aa 83, 84	3
	Aa 98	Y 36, 37	Y 44, 45	3
	Aa 99, 100	Y 43	Bb 1, 20	3
	Y 44, 45	Y 65, 76, 85	Y 56, 57	3
	Y 85	Y 59, 63	Y 63, 78	3
	Y 96, 97	Dd 4	Y 86	3
	Y 68, 73	Y 74, 75	Y 66, 67	3
	Y 90, 91	Dd 5	Y 88, 93	3
	Y 89, 92	Y 95, Dd 6	Y 87, 94	3
	Dd 8, Dd 9			1
	<i>Carried forward</i>			6,659

LIST OF PLANS. — *Concluded.*

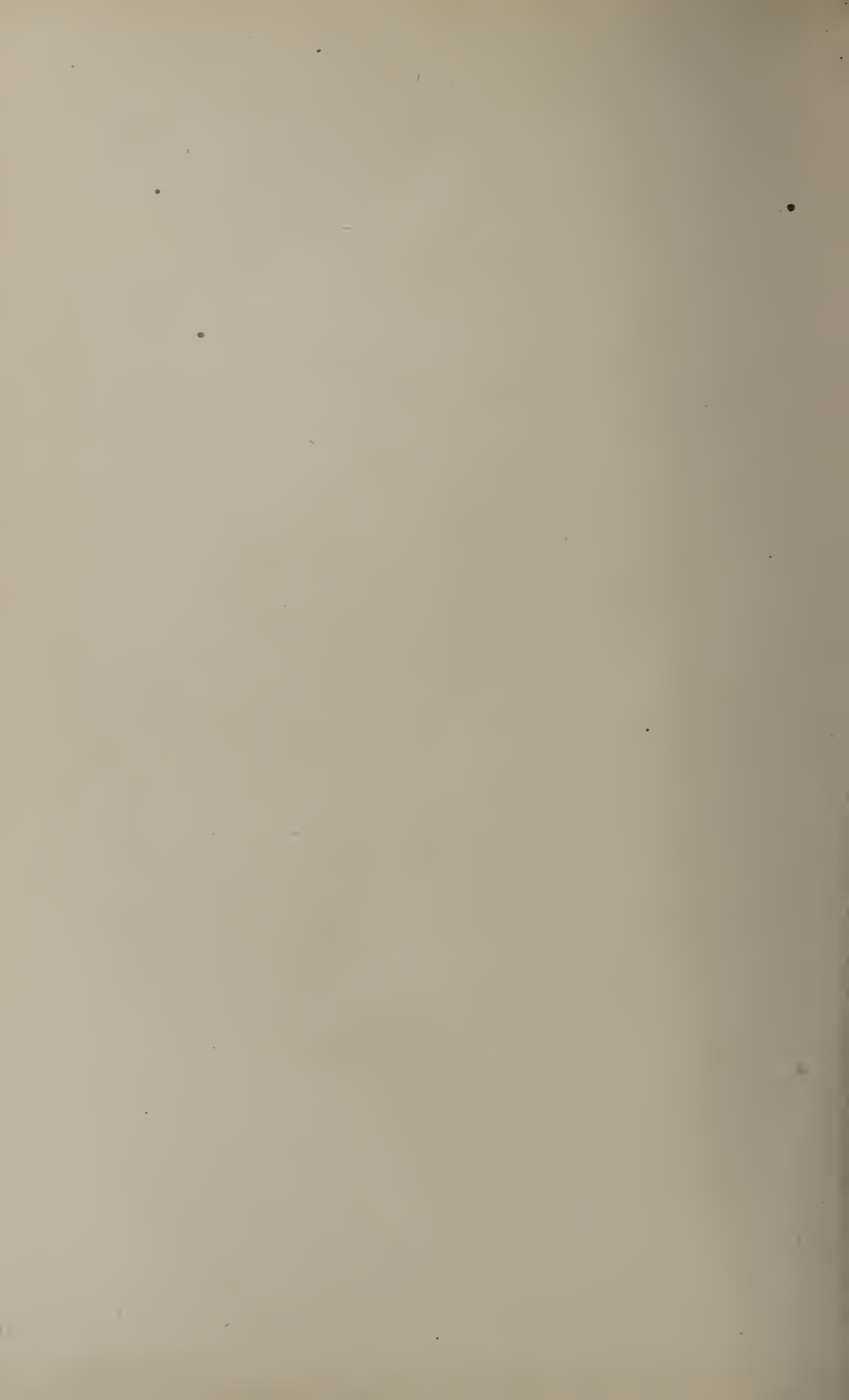
Indexed.	Classification.	Number of Plans.
	<i>Brought forward</i>	6,659
	<i>Plans from Actual Survey.</i>	
Case NN.....	Miscellaneous tracings and blue prints.....	48
	Plans and profiles showing grades.....	411
Case OO.....	Miscellaneous tracings and blue prints.....	155
	Plans and profiles showing grades.....	402
Case QQ.....	Plans and profiles showing grades.....	202
	T 81, 82 T 99, 100 U 90, 91	3
	X 1, 2 W 10 Dd 5	3
Case SS.....	Plans and profiles showing grades.....	510
Case VV.....	Grade plans.....	46
Case ".....	Contour plans.....	44
	Plans and profiles showing grades.....	361
Drawer WW.....	Flat grade plans.....	21
" A-M.....	Miscellaneous plans in B of S, Sections A to M.....	25
" N.....	" " " " " N.....	28
" O-V.....	" " " " " O to V.....	3
" W.....	" " " " " W.....	20
" X-Z.....	" " " " " X to Z.....	10
" Miscel.....	" " " " " 	7
	<i>Total</i>	8,958

Not included in the foregoing list there are the following lithographed plans:

Lithographed plans of City of Boston, scale, $\frac{1}{20000}$.	Report, 1895.....	12
" " " Bowdoin street, Hawkins street.	Report, 1894.....	15
" " " Boston Common and vicinity.	Report.....	75
" " " Section T 2.....		188
" " " " N 24.....		195
" " " " N 25.....		195
" " " " O 74.....		194
" " " " O 75.....		194
" " " " O 77.....		194

Respectfully submitted,

SALEM D. CHARLES,
JAMES A. GALLIVAN,
JOHN H. DUNN,
Street Commissioners.





ANNUAL REPORT
OF THE
SUPPLY DEPARTMENT
FOR THE YEAR 1908-1909.

CITY OF BOSTON, SUPPLY DEPARTMENT.
BOSTON, MASS., March 5, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— In accordance with the Revised Ordinances of 1908, chapter 6, section 4, I herewith submit the report of the Supply Department for the year ending January 31, 1909.

This department was created by ordinance in February, 1906, for the purpose of purchasing supplies for the following departments: Bridge, Sanitary, Sewer, Street, Street Cleaning and Watering, and Street Department, Ferry Division.

On February 17, 1908, Mr. Walter F. Burk of East Boston was appointed as Superintendent of Supplies for the year ending April 30, 1908.

On April 23, 1908, a new ordinance was created to broaden the scope of the old department, and it was passed and approved by you on May 1, 1908.

ORDINANCE OF 1908, CHAPTER 6, ESTABLISHING A SUPPLY DEPARTMENT.

Be it ordained by the City Council of Boston as follows:

SECTION 1. The Supply Department shall be under the charge of the Superintendent of Supplies, who shall, upon requisition in writing, signed by the head of any department, supply materials, apparatus and other

supplies required by such department, except furniture and those supplied by the Superintendent of Printing. Said Superintendent shall on the fifteenth day of each month send to the City Auditor a detailed statement of the purchases made for each department during the preceding month, which statement shall be approved by the official in charge of the department.

SECT. 2. Every officer in charge of a department requiring materials, apparatus and other supplies, except furniture and those supplied by the Superintendent of Printing, shall obtain the same of the Superintendent of Supplies by means of a requisition therefor on blanks to be prepared by said Superintendent.

SECT. 3. Said Superintendent shall keep proper books of account, and when satisfied of the legality of any requisition shall at once comply with it and make proper entries on his book. He shall require suitable evidence that the materials and supplies furnished are accepted by the officer issuing the requisition.

SECT. 4. Said Superintendent shall in his annual report include a statement of the cost of all supplies furnished each department or officer.

SECT. 5. Chapter two of the Revised Ordinances of eighteen hundred and ninety-eight is hereby amended in section one by inserting after the words "the Superintendent of Streets," the words "the Superintendent of Supplies."

SECT. 6. Chapter three of the Revised Ordinances of eighteen hundred and ninety-eight is hereby amended in Section five by inserting after the words "the Superintendent of Streets, seventy-five hundred dollars," the words "the Superintendent of Supplies, three thousand dollars."

I am taking for comparison, as shown by the following tables, what has been saved the city in the Street Department for the year on the four leading articles used by the city. This is due to three things: consolidation of purchases, enabling the city to get lower prices; higher standard of merchandise furnished, and economy in their use. Wastefulness has been reduced to a minimum, this is notable in the amount of oil used and in the purchases of lumber.

HAY, GRAIN, STRAW.

	1907-08.	1908-09.
Bridge Division	\$1,627 34	\$1,331 85
Sanitary Division	65,432 28	53,818 61
Sewer Division	14,152 86	9,434 12
Street Department	30,666 72	21,915 14
Street Cleaning and Watering Division	17,996 90	16,171 36
	\$129,876 10	*\$102,671 08

* Decrease, \$27,205.02.

LUMBER — SPRUCE.

	1907-08.	1908-09.	Decrease.
Bridge Division	\$13,001 94	\$10,461 21	— \$2,540 73
Sanitary Division	1,795 18	1,783 84	— 11 34
Sewer Division	29,342 17	19,687 07	— 9,655 10
Street Department	7,886 79	4,810 64	— 3,076 15
Ferry Division	2,656 39	2,800 52	+ 144 13
Street Cleaning and Watering Division . . .	41 61	71 44	+ 29 83
	\$54,724 08	\$39,614 72	\$15,109 36

OIL — LUBRICATING.

	1907-08.	1908-09.
Bridge Division	\$610 05	\$952 72
Sanitary Division	77 08	15 50
Sewer Division	2,586 35	1,414 68
Street Department	588 16	332 69
Ferry Division	3,016 31	1,407 96
Street Cleaning and Watering Division	161 63	99 34
	\$7,039 58	*\$4,222 89

* Decrease, \$2,816.99.

COAL CONSUMPTION.

The establishing of a standard and the method of purchasing shows a great gain for the city in the year ending January 31, 1909, \$46,416.23 having been saved to the city:

	PURCHASES.		
	1907-08.	1908-09.	Decrease.
Bridge Division	\$3,154 74	\$3,128 54	\$26 20
Sanitary Division	1,530 11	1,082 74	447 37
Sewer Division	51,001 12	32,338 47	18,662 65
Street Department	11,350 47	6,646 76	4,703 71
Ferry Division	54,046 64	31,536 48	22,510 16
Street Cleaning and Watering Division . .	303 93	237 79	66 14
Totals	\$121,387 01	\$74,970 78	\$46,416 23

PURCHASES MADE FOR THE SIX ORIGINAL DEPARTMENTS, SHOWING
DECREASE 1907-1908 and 1908-1909.

	1907-08.	1908-09.	Decrease.
Bridge Division	\$24,409 04	\$22,583 67	\$1,825 37
Sanitary Division	92,680 20	77,338 77	15,341 43
Sewer Division	352,393 09	186,073 63	166,319 46
Street Department	227,038 00	142,428 48	84,609 52
Ferry Division	72,617 66	44,812 33	27,805 33
Street Cleaning and Watering Division..	27,942 39	25,556 09	2,386 30
Totals	\$797,080 38	\$498,792 97	\$298,287 41

Much of this saving or decrease in purchases was owing to placing contracts where in the past the work was done by the city.

SUMMARY OF PURCHASES BY THE SUPPLY DEPARTMENT
YEAR ENDING JANUARY 31, 1909.

Bath Department	\$11,390 13*
Bridge Division	22,583 67
Cemetery Department	2,239 55*
Children's Institutions Department	8,755 01*
Consumptives' Hospital Department	2,795 25*
Election Department	840 95*
Engineering Department	316 89*
Ferry Division	44,812 33
Fire Department	123,959 96*
Health Department	12,955 59*
Insane Hospital Department	4,316 66†
Lamp Division	181 53*
Library Department	8,218 53†
Market Department	98 66*
Overseers of Poor Department	1,767 35†
Park Department	3,302 60†
Penal Institutions Department	14,846 35*
Police Department	1,519 31†
Public Buildings Department	17,324 36*
Public Grounds Department	6,816 97*
Sanitary Division	77,338 77
Sewer Division	186,073 63
Street Department	142,428 48
Street Cleaning and Watering Division	25,556 09
Total	\$720,438 62

* Purchases made through the Supply Department since June 1, 1908.

† Purchases of Coal and Wood only since June 1, 1908.

PURCHASE OF BITUMINOUS COAL.

Previous to 1908, while the city may have had a standard for bituminous coal, no effort was made by the city or its representatives to make the contractors live up to their contract, and substitutions of inferior coals seemed to be

	Bath.	Cemetery.	Children's Institutions.	Consump- tives' Hospital.	Election.	Engi- neering.	Fire.	Health.	Insane Hospital.	Lamp.	Library.	Market.	Overseers of the Poor.	Park.	Penal Institu- tions.	Police.	Public Buildings.	Public Grounds.	Bridge.	Ferry.	Sanitary.	Sewer.	Street.	Street Cleaning.	TOTAL.
Auto supplies.....							\$2,348 05	\$3 74													\$2,119 29	\$1,029 43	\$2,482 87	\$27 00	\$8,010 38
Bags.....							38 25															420 12		11 49	469 86
Bathing caps.....	\$83 25																								83 25
Bathing suits.....	396 06																								396 96
Bedding.....							20 90	1,226 25																	1,247 15
Badges.....			\$19 04				228 50														20 16	3 75	3 75		275 20
Blankets.....							895 00			\$3 75									\$23 00		56 75	136 00	136 00	60 00	1,310 50
Bread.....			37 98	\$26 13				183 18																	247 29
Bricks, paving.....								76 75											1 26	\$4 00			8,067 72		8,149 73
Bricks, sewer.....		\$11 00													\$79 50							16,236 97			16,327 47
Brooms.....	68 60	7 60		40 72			682 90	63 18				\$4 88					\$401 52	\$57 70	104 10	192 98	249 23	94 85	105 44	1,374 47	3,448 17
Butter.....			183 65	83 35				238 56																	505 56
Carriage supplies.....	11 50					\$7 00	1,444 94											3 61	50 60		2,132 57	60 43	280 81	32 95	4,024 41
Castings.....		1 08				48 64	1,903 88	2 35									168 04	61 26	10 01	164 87	295 05	3,712 97	308 44	5 00	6,681 59
Cement (Natural).....		3 45															50					523 50	17 85		548 35
Cement (Portland).....		63 25	4 27				6 32							437 50				54 55		19 60		30,547 96	250 10		31,383 55
Cereals.....			44 58	38 00				18 75																	101 33
Chemicals.....	35 25	65 60				134 64	608 46	964 75									60 22	1,049 29	6 00	21 34		7 13	223 03	80 00	3,255 71
China.....			9 09	29 60													21 03								59 72
Clocks.....				13 50													10 75				9 00	62 15	9 35		111 25
Clothing.....			86 42					37 50																	123 92
Coal (Bituminous).....	1,304 61	44 85	5,745 40	138 18			3,715 84	2,397 08	\$4,002 74					\$120 05	12,846 05	\$334 86	77 00	961 90		31,536 48	198 55	27,554 53	1,455 85		92,433 97
Coal (Anthracite).....	2,007 46	895 32	830 25	\$18 27	\$120 12	3 10	22,837 48	224 63	313 92		\$8,182 90	16 51	\$1,426 50	3,182 55	24 60	1,162 20	13,033 83	120 84	3,128 54		1,254 41	4,783 94	6,190 91	237 79	70,796 07
Corn.....							84 26	220 20							110 10				10 59		276 45	81 02	321 15		1,103 77
Cheese.....			25 59					52 09																	77 68
Car tickets.....																				15 80	20 00		191 00	26 00	252 80
Disinfectant.....	161 15	1 80		65 20	5 00		508 71	11 30									187 00	5 00			106 25	133 25	61 95		1,246 61
Draughting supplies.....							4 43										49	3 80	3 45			1,343 58	109 05	30 00	1,494 80
Drugs.....	12 27	3 75	22 21	203 09			390 00	370 33									56 55	12 98	15 90	2 83	110 20	52 90	44 88	42 25	1,340 14
Dry goods.....	17 91		96 08	145 18	5 24		2,030 64	148 85									34 45		6 00		70 44	48 37	32 78		2,635 94
Eggs.....				47 03																					47 03
Edgestones.....		8 44																					19,182 52		19,190 96
Electric supplies.....	9 61						767 09	21 23									431 79	65	124 83	235 28	11 44	421 43	59 14		2,082 49
Excelsior.....							143 72	16 25																	159 97
Explosives.....																						91 63	602 45		694 08
Engine parts.....	20 44	4 76					1,792 97	38 31									28 64	3 94	104 68	400 30	277 54	5,013 27	1,039 01	597 73	9,321 59
Fire engines.....							10,850 00																		10,850 00
Fire extinguisher.....							120 00																		120 00
Fire bells.....							124 20																		124 20
Fire hats.....							249 50																		249 50
Fish.....			16 25	54 10				88 32																	158 67
Flagging.....		9 60																				6 00	4,702 89		4,718 49
Flour.....			206 50					83 15																	289 65
Flower pots.....		76 00						84 96											125 67						201 67
Fruit.....			71 72	81 23																					237 91
Furniture.....							9 01			3 00										12 24			6 00		30 25
Garbage cans.....	43 50				18 00		436 89	19 55									71 26	7 50	27 80	65 60	360 25	95 30	7 65	421 27	1,574 57
Gasoline.....							160 89											12 50				90 57	84 95		348 91
Glass.....	24 03				4 38		140 71			173 43							11 23	23 85	11 25	36 19	35 75	20 43	28 69		509 94
Gravel, bank.....																		256 79				3,011 51	9,331 61		12,599 91
Gravel, beach.....																						1,840 50			1,840 50
Grease.....							30 60	4 00									8 60		9 89	123 68	113 56	253 68	58 21	43 30	645 52
Groceries.....			217 77	44 00				132 97																	394 74
Gymnasium supplies.....	511 77		23 88																						535 65
Hardware.....	319 99	6 75	43 07	43 83	208 55		1,222 26	53 90									382 25	85 36	2,530 05	579 09	680 49	843 10	480 15	69 40	7,498 24
Harnesses.....	6 75						1,282 80	1 70		1 35								18 65			1,214 69	142 56	205 92	6 00	2,880 42
Hay.....		312 52	191 53				12,583 94	584 73						249 20			108 22	195 92	689 89		18,519 77	4,439 66	10,152 83	5,331 55	53,359 76
Horses.....							12,014 41	250 00														4,515 00			16,779 41
Horse supplies.....		19 33					1,071 32	44 50									20 50		51 73		2,221 58	108 62	630 92	87 38	4,255 88
Hose.....		19 50	19 13	14 80			8,545 38										46 15	25 60	14 00	396 45	143 53	1,618 45	142 87	300 27	11,286 13
Hospital supplies.....				276 90				2,223 90																	2,512 80
Ice.....	228 55							19 50									487 02								735 07
Iron.....	67 02						533 12													67 26	1,200 13	169 56	65 08	10 30	2,112 47
Lead, white.....	159 74	13 50					198 30											47 25	39 00	258 10	201 75	42 69			960 33
Lighting supplies.....					161 47		947 71	9 00									40 51		54 48	156 17	2 97	219 46	335 80	5 92	1,933 49
Lime.....							2 90																		46 30
Lumber, spruce.....	907 29	20 31	20 40		38 87		1,135 35								32 50						3 40	5 00	1 25	1 25	
Lumber, hard pine.....	785 53						462 16								88 92		11 29	507 15	10,461 21	2,800 52	1,743 84	19,687 07	4,810 64	71 44	42,304 30
Lumber, hard wood.....	19 85		68 38		25 69		1,821 02								235 81		49 43	120 37	1,735 13	1,380 11	154 43	755 52	359 30	12 55	6,050 34
Oats.....		350 58													489 09		80 56	203 82	1,084 29	2,349 32	1,916 44	374 76	659 71		9,092 93
Oatmeal.....							12,826 07	548 55							148 80		103 88	332 50	596 86		31,883 54	4,543 71	10,643 17	9,877 94	71,855 60
Office supplies.....	367 27	2 00	43 48	141 74		3 25	393 56	88 15				58 00					340 36	10 75		28 50	24 01	116 89	106 10		222 99
Oil, cylinder.....	12 10	1 08				8 00	147 52	59 12									82 34			875 15	796 13	15 50	691 11	220 16	11 80
Oil, engine.....	9 45		19 21				142 61	10 26									5 50	1 25	77 57	611 83		723 57	112 53	87 54	1,801 32
Oil, illuminating.....	17 00	1 95</																							

the order of the day. In April, 1908, the Finance Commission, with the aid of coal experts, succeeded in getting together a set of specifications that practically made a standard for the city. Under this arrangement contractors were allowed to bid on two plans, as follows:

The bidder must state the name of the coal, the name or other designation of the coal bed or seam, and the name and location of the mine or mines from which the coal or coals are to come.

As to quality and price, bids may be submitted on one or both of the following plans:

Plan No. 1.—For Big Vein Georges Creek Cumberland coal, mined in Maryland, or Pocahontas, or New River, each of the best quality, with certain minimum tests for B. T. U. and ash, as per specifications.

Plan No. 2.—*Alternative Plan.* For any good steaming coal, to be paid for on a valuation basis. The coal submitted on this basis to be sold on certain standard tests, with a sliding scale of price, with certain fixed maximum and minimum limits, as per specifications.

On April 30, 1908, the Supply Department, through the Superintendent of Streets, invited bids, by advertising in six (6) papers, for the bituminous coal needed for the year ending April 1, 1909, for the following departments:

Children's Institutions, Rainsford Island.....	700	tons more or less
Health Department, Quarantine Station.....	500	" "
Penal Institutions Department, Deer Island.....	6,500	" "
Pauper Institutions Department, Long Island....	5,000	" "
Sewer Division, Cow Pasture, Pumping Station..	10,000	" "
Ferry Division, North and South Ferries.....	10,000	" "

Bids were opened May 7, the following concerns having sent in bids:

FURNISHING 32,000 TONS, MORE OR LESS, OF SEMI-BITUMINOUS COAL, DELIVERED AT THE FOLLOWING PLACES: RAINSFORD ISLAND, LONG ISLAND, FERRY AND SEWER DIVISIONS, DEER ISLAND AND GALLOP'S ISLAND. BIDS OPENED MAY 7, 1908.

PLANS.	Children's Institutions, Suffolk School, 700 tons.		Pauper Institutions, Almshouse and Hospital, 4,800 tons.		Ferry Division. 10,000 tons.		Sewer Division. 10,000 tons.		Penal Institutions, 6,500 tons.		Health Quarantine Station, 500 tons.	
	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.
Merehants Coal Company.....		\$4 18		\$3 98		\$3 74		\$3 79		\$3 64		\$4 18
E. B. Townsend.....			\$4 57	4 25	\$4 17	3 85	\$4 17	3 85	\$4 02	3 70		
George E. Warren Company.....			4 07		3 67½		3 72		3 64½			
E. Russell Norton.....				4 32		4 19		4 17		3 87		
Staples Coal Company.....		4 27				3 77				3 55		4 27
Sturtevant Coal Company.....						3 99		4 09				
Metropolitan Coal Company.....	\$4 29	4 05	3 89	3 65	3 89	3 65	3 89	3 65	3 59	3 35	\$4 29	4 05
Darrow-Mann Company.....	5 00		4 20		4 00		4 00		3 75		5 00	
Hawley School of Engineering Corpora- tion.....			4 21		3 64		3 84		3 63			
A. Gove & Son Incorporated.....	4 32		4 20		3 64		3 85		3 66		4 32	
Clark Brothers Coal Company.....		4 12		3 79		3 39		3 49		3 17		4 12
Spring Coal Company.....	4 13	3 98	4 13	3 98	3 52	3 37	3 68	3 53	3 48	3 33	4 10	3 95

NOTE.— Plan No 1. Big Vein Georges Creek Cumberland, or Pocahontas, or New River.
Plan No. 2. Any good steaming coal.

The contracts were awarded to —

	Plan.	
Spring Coal Company, for Children's Institutions, Rainsford Island	1	\$4 13 a ton.
Metropolitan Coal Company, for Pauper Institutions Department	2	3 65 "
Spring Coal Company, for Ferry Division	1	3 52 "
Clark Bros. Coal Company, for Sewer Division	2	3 49 "
Clark Bros. Coal Company, for Penal Institutions Department	2	3 17 "
Spring Coal Company, for Health Department	1	4 10 "

Prices Paid in 1907.

Ferry Division	\$4 74 "
Sewer Division	3 85 "
Pauper Institutions Department	4 57 "
Penal Institutions Department	3 60 "

May 29 bids were asked, through advertisements, for the coal needed in the several departments not already provided for, deliveries to cover the period from June 1 to September 1, 1908. Four concerns put in bids, as follows:

	Broken.	Egg.	Stove.	Soft.
Marston Coal Company	\$5 60	\$6 15	\$6 15	\$4 20
J. P. Stewart & Co	5 72	6 13	6 13	4 23
Metropolitan Coal Company	5 85	6 25	6 25	4 40
Burnham Coal Company	5 78	6 45	6 45	4 50

The contract was awarded to the Marston Coal Company.
Prices paid in 1907 for the same period:

Marston Coal Company	\$5 85	\$6 10	\$6 45	\$4 40
--------------------------------	--------	--------	--------	--------

On September 21 we placed a contract with the Marston Coal Company for the coal needed by the different departments; this contract was not advertised. Prices made by the Marston Coal Company were —

Stove.	Egg.	Furnace.	Soft.
\$6 20	\$6 18	\$5 66	\$4 34

The city paid in 1907, buying in the open market—

Stove.	Egg.	Furnace.	Soft.
\$7 15	\$6 65	\$6 15	\$5 00

On November 29 Mr. Burk sent in his resignation, to date December 1, which was accepted by you, and Mr. Guy C. Emerson, Superintendent of Streets, was appointed Acting Superintendent of Supplies.

On December 14 the following advertisement was placed in three papers, running three days:

PROPOSALS FOR COAL.

CITY OF BOSTON, OFFICE OF SUPPLY DEPARTMENT, ROOM 801 TREMONT BUILDING.

Contractors are invited to furnish proposals for a supply of whatever hard white ash, broken, egg and stove coal, and also whatever bituminous coal for steam purposes, that may be required for the public buildings, and for the several departments of the City of Boston not otherwise provided for, from January 1, 1909, to April 1, 1909. A certified check for \$1,000 payable to and to be the property of the City of Boston if the proposal is not carried out must be filed with the proposal. A satisfactory bond in the sum stated in the contract will also be required. The bidders must use the form of proposal to be obtained at the office of the Supply Department, 801 Tremont Building, fill out and sign the same, and leave it at the office of the Superintendent of Supplies before 12 o'clock M., of Monday, Dec. 14, 1908, at which time and place said proposals will be publicly opened and read. The proposals and check should be inclosed in an envelope indorsed "Proposals for Coal." The undersigned reserves the right to reject any and all proposals and give preferences to bidders paying the trades' unions' rate of wages. GUY C. EMERSON, Acting Superintendent of Supplies.

Bids were received from the following:

	Stove.	Egg.	Furnace.	Bituminous
Batchelder Brothers.....	\$6 10	\$6 10	\$5 50	\$4 25
Marston Coal Company.....	6 58	6 58	5 74	4 25
J. P. Stewart & Co.....	6 85	6 85	6 00	4 35
Metropolitan Coal Company.....	7 00	6 75	6 25	4 50

Coal called for in contract: 700 tons stove, 2,000 tons egg, 4,000 tons broken, 1,000 tons soft. The contract was awarded to Batchelder Brothers at prices named in bid.

Prices paid in January, February and March, 1908.

Stove.	Egg.	Furnace.	Soft.
\$7 15	\$6 65	\$6 15	\$5 00

Difference in price, based on quantity advertised for, \$5.185.

GRAVEL, STONES AND CEMENT.

June 24 bids were asked for a supply of bank gravel and sand, deliveries to cover the period from June 30, 1908, to February 1, 1909; bidding was done by districts.

		DISTRICTS.								
		1.	2.	3.	5.	6.	7.	8.	9.	10.
John T. Scully	{ gravel			\$1 80				\$1 75	\$1 75	\$1 75
	{ sand			1 50				1 75	1 75	1 75
Thomas J. Shea	{ gravel				\$1 70		\$1 70			
	{ sand				1 70		1 70			
J. A. Whittemore	{ gravel				1 58					
	{ sand				1 68					
James F. Murphy	{ gravel					\$1 48				
	{ sand					1 50				
J. F. Dooley	{ gravel								1 57	
	{ sand								1 55	
J. P. O'Riorden	{ gravel	1 50	1 36	1 50				1 60	1 60	1 50
	{ sand	1 40	1 36	1 20				1 30	1 60	1 20
Thomas F. Minton	{ gravel				1 40					
	{ sand				1 40					
William Gilligan Company	{ gravel						1 60	1 60	1 60	1 80
	{ sand						1 40	1 30	1 60	1 80
James McGovern	{ gravel					1 50				
	{ sand					1 50				

District 4 — No bids.

Contracts awarded to —

District 1, J. P. O’Riorden.	District 6, James McGovern.
“ 2, J. P. O’Riorden.	“ 7, Wm. Gilligan Company.
“ 3, J. P. O’Riorden.	“ 8, Wm. Gilligan Company.
“ 4, No bidder.	“ 9, James F. Dooley.
“ 5, Thomas F. Minton.	“ 10, J. P. O’Riorden.

In June the Fire, Health, Public Buildings and Public Grounds Departments commenced purchasing through this department; the Penal, Pauper, Police and Library Departments added to the work of the department by making their coal purchases through us. The result of pooling their purchases on coal has been very much to the advantage of the city, enabling the city to get better coal, deliveries and the saving of much money.

On August 27, 1908, the business of the department having increased in volume, Mr. J. Edward Mullen of Ward 11 was appointed as assistant to Mr. Burk.

October 23 advertisements calling for bids on 100,000 paving blocks were sent out; bids publicly opened October 27th at 12 m. The following contractors sent in bids on the contract:

Rockport Granite Company	\$72 30 M.
Thomas Leahy	67 00 "
S. & R. J. Lombard:	
On Rockport granite	72 00 "
On New Hampshire granite	64 00 "
Pigeon Hill Quarry Company:	
On No. 1 Cape Ann granite	72 60 "

The contract was awarded to S. & R. J. Lombard at \$64 a thousand.

October 23 advertisements calling for bids and the delivery of 4,100 tons crushed stone and dust were put in papers; bids publicly opened October 26 at 12 m. The following contractors put in bids:

	1,000 Tons, Lawn Street.	500 Tons, Gainsboro Street.	500 Tons, Huntington Avenue.	400 Tons, Dorchester Avenue.	1,700 Tons, Roslindale Avenue.
Hugh Nawn Contracting Company...	\$1 40	\$1 40	\$1 40	\$1 60	\$1 40
Thomas F. Welch.....					1 25
Bleiler Contracting Company.....	1 35	1 40	1 40		
J. C. Coleman.....	1 65	1 30	1 30	1 75	1 75
Massachusetts Broken Stone Company		1 69	1 69		
Thomas F. Minton.....					1 25
William Gilligan Company.....		1 20	1 20		
Beatty Construction Company.....		1 40	1 40		

Contract, Lawn street, awarded to Bleiler Contracting Company.
Contract, Gainsboro street and Huntington avenue, awarded to William Gilligan Company.
Contract, Dorchester avenue, awarded to Hugh Nawn Contracting Company.
Contract, Roslindale avenue, awarded half each to T. F. Welch and T. F. Minton.

PORTLAND CEMENT.

On October 23 advertisements calling for prices on 1,500 barrels of Portland cement were placed in the daily papers. Bids were opened October 26 at 12 m. The following dealers put in bids:

William C. Norcross Company, \$1.66 a barrel in cotton. (Allowance of 6½ cents each on bags.)
Henry Crafts' Sons, \$1.85 a barrel, Portland-Dragon brand. (Allowance of 6½ cents each on bags.)
Curtis & Pope Lumber Company, \$1.70 a barrel for Alpha.
Eastern Clay Goods Company, \$1.79 a barrel.

Contract awarded to William C. Norcross Company at \$1.66 a barrel.

HAY AND GRAIN.

On November 2 the department commenced to advertise for a month's supply of hay, grain and straw. While the number of bids received were small, the results were more than satisfactory.

DISTRICT.	Hay.	Straw.	Oats.	Shorts.	Corn.
<i>South Boston:</i>					
W. P. Whittemore.....	\$15 75	\$20 00	\$0 54	\$27 00	\$0 90
<i>East Boston:</i>					
W. P. Whittemore.....	16 25	20 00	54	27 00	90
<i>Charlestown:</i>					
Landy Bros.....	15 75	19 75	.....	.....	.....
W. P. Whittemore.....	.....	.....	54	27 00	90
<i>City Proper:</i>					
Landy Bros.....	15 50	19 75	.....	.....	.....
W. P. Whittemore.....	.....	.....	54	27 00	90
<i>Roxbury:</i>					
Landy Bros.....	15 50	19 75	.....	.....	.....
W. P. Whittemore.....	.....	.....	54	27 00	90
<i>Dorchester:</i>					
W. P. Whittemore.....	16 00	20 00	54	27 00	90
<i>West Roxbury:</i>					
W. P. Whittemore.....	16 00	20 00	54	27 00	90
<i>Brighton:</i>					
Landy Bros.....	16 00	20 00	.....	.....	.....
W. P. Whittemore.....	.....	.....	54	27 00	90

The contract on oats and grain for the entire city awarded to W. P. Whittemore Company; hay and straw to Landy Bros., for South Boston, Charlestown, City Proper and Roxbury; balance of city to W. P. Whittemore Company.

In 1907, without competitive bids, the city paid for hay \$22.75 to \$24 a ton; for oats, 58 cents to 61 cents a bushel.

In November, 1908, under competition the city paid for hay \$15.50 to \$16.25 a ton; for oats, 54 cents a bushel;—the saving for November reaching \$2,500.

November 27 we advertised for a month's supply of hay, grain and straw for the Street, Sewer, Sanitary, Health and Fire Departments; bids opened and read publicly November 30, at 12 m. Bids were received from the following parties:

BIDS FOR FURNISHING HAY, STRAW AND GRAIN FOR THE MONTH OF
DECEMBER, 1908.

	Hay.	Straw.	Oats.	Shorts.	Corn.
<i>South Boston:</i>					
Hosmer, Robinson & Co.....	\$18 00	\$22 00	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	\$0 59	\$27 00	\$0 84
<i>East Boston:</i>					
Hosmer, Robinson & Co.....	18 00	22 00	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	84
<i>Charlestown:</i>					
Hosmer, Robinson & Co.....	18 00	22 00	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	84
<i>City Proper:</i>					
Hosmer, Robinson & Co.....	18 00	22 00	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	84
<i>Roxbury:</i>					
Hosmer, Robinson & Co.....	18 00	22 00	.....	.....	.....
W. P. Whittemore Company.....	16 50	22 00	59	27 00	84
<i>Dorchester:</i>					
Hosmer, Robinson & Co.....	18 50	22 50	.....	.....	.....
W. P. Whittemore Company.....	17 00	22 00	59	27 00	84
<i>West Roxbury:</i>					
Hosmer, Robinson & Co.....	18 50	22 50	.....	.....	.....
W. P. Whittemore Company.....	17 00	22 00	59	27 00	84
<i>Brighton:</i>					
Hosmer, Robinson & Co.....	18 50	22 50	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	84

W. P. Whittemore Company were awarded the contract for oats and grain for the entire city; also the hay for Roxbury, Dorchester and West Roxbury. Hay for South Boston, East Boston, Charlestown and City Proper awarded to Hosmer, Robinson & Co. (Bids opened November 30, 1908.)

Average price paid on hay in December, 1907 . . . \$22 50 a ton.
Oats . . . 62½c., bushel.
Showing a saving to the city of approximately . . . \$2,000

Bids for the month of January, 1909, were advertised in the daily papers December 24; bids were opened December 30, at 12 m., and were received from the following parties:

	Hay.	Straw.	Oats.	Shorts.	Corn.
<i>South Boston:</i>					
Lord & Webster.....	\$17 00	\$24 00	\$0 61	\$28 00	\$0 75
Hosmer, Robinson & Co.....	15 70	23 00	.....	.....	.....
C. F. & G. W. Eddy.....	16 25	.....	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	80
B. F. Griggs.....	17 50	23 00	55½	30 00	80
Boston Hay Company.....	18 00	.....	.....	.....	.....
<i>East Boston:</i>					
Lord & Webster.....	17 00	24 00	61	28 00	75
Hosmer, Robinson & Co.....	15 70	23 00	.....	.....	.....
C. F. & G. W. Eddy.....	16 25	.....	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	80
B. F. Griggs.....	17 50	23 00	55½	30 00	80
Boston Hay Company.....	18 00	.....	.....	.....	.....
<i>Charlestown:</i>					
Lord & Webster.....	17 00	24 00	61	28 00	75
Joseph Landy & Co.....	16 50	24 00	.....	.....	.....
Hosmer, Robinson & Co.....	15 70	23 00	.....	.....	.....
C. F. & G. W. Eddy.....	16 25	.....	.....	.....	.....
W. P. Whittemore Company.....	.....	.....	59	27 00	80
B. F. Griggs.....	17 50	23 00	55½	30 00	80
Boston Hay Company.....	17 75	.....	.....	.....	.....
<i>City Proper:</i>					
Lord & Webster.....	17 00	24 00	61	28 00	75
Joseph Landy & Co.....	16 50	24 00	.....	.....	.....
Hosmer, Robinson & Co.....	15 70	23 00	.....	.....	.....
C. F. & G. W. Eddy.....	16 25	.....	.....	.....	.....
W. P. Whittemore Company.....	17 00	25 00	59	27 00	80
B. F. Griggs.....	17 50	23 00	55½	30 00	80
Boston Hay Company.....	17 75	.....	.....	.....	.....
<i>Roxbury:</i>					
Lord & Webster.....	17 75	24 00	61	28 00	75
Joseph Landy & Co.....	16 25	24 00	58	26 50	75
Hosmer, Robinson & Co.....	15 70	23 00	.....	.....	.....
C. F. & G. W. Eddy.....	16 25	.....	.....	.....	.....
W. P. Whittemore Company.....	16 50	25 00	59	27 00	80
B. F. Griggs.....	17 50	23 00	55½	30 00	80
Boston Hay Company.....	18 00	.....	.....	.....	.....

	Hay.	Straw.	Oats.	Shorts.	Corn.
<i>Dorchester:</i>					
Hosmer, Robinson & Co.....	\$16 00	\$23 50	.....	.....	.....
C. F. & G. W. Eddy.....	16 75	.....	.....	.....	.....
W. P. Whittemore Company.....	16 50	25 00	\$0 59	\$27 00	\$0 80
B. F. Griggs.....	17 50	23 50	55½	30 00	80
Boston Hay Company.....	18 25	.....	.....	.....	.....
<i>West Roxbury:</i>					
Hosmer, Robinson & Co.....	16 00	23 50	.....	.....	.....
C. F. & G. W. Eddy.....	16 75	.....	.....	.....	.....
W. P. Whittemore Company.....	16 50	25 00	59	27 00	80
B. F. Griggs.....	17 00	23 00	55½	30 00	80
Boston Hay Company.....	18 25	.....	.....	.....	.....
<i>Brighton:</i>					
Hosmer, Robinson & Co.....	16 00	23 50	.....	.....	.....
C. F. & G. W. Eddy.....	16 75	.....	.....	.....	.....
W. P. Whittemore Company.....	16 50	25 00	59	27 00	80
B. F. Griggs.....	17 50	23 00	55½	30 00	80

Hosmer, Robinson & Co. were awarded the contract for hay for the entire city; W. P. Whittemore Company awarded the oats and grain for South Boston, East Boston, Charlestown, City Proper, Dorchester, West Roxbury, Brighton; Joseph Landy & Co. awarded the oats and grain for Roxbury.

In January, 1908, the prices ranged on oats from 61½ cents to 64 cents a bushel, and on No. 2 hay from \$21 to \$23.50 a ton. In January, 1909, under the system of advertising for a month's supply for all the departments, a very material saving was made, No. 2 oats costing the city 59 cents a bushel; No. 2 hay costing \$15.70 to \$16 a ton. The departments buying through the Supply Department use about 325 tons of hay and 10,500 bushels of oats, showing a saving for the month of January of approximately \$2,250.

On January 6, 1909, proposals for spruce lumber were advertised publicly; the advertisement ran three days; copies of the advertisement were, in addition, mailed to sixteen (16) lumber dealers; but five, however, took out the forms to bid on, and only two bid on the entire city. Bids were opened on January 14 at noon. The bids were thrown out by me, with your approval, as we were buying in the open market at lower figures. Following is a list of the bids received:

	South Boston.	East Boston.	Charlestown.	Brighton.	West Roxbury.	Dorchester.	Roxbury.	City Proper.
J. O. Wetherbee Company	\$26 20	\$27 50	\$25 40	.....	.....	.....	.....	\$27 50
Blacker & Shepard	25 74	.....	.....	.....	.....	.....	.....	25 74
William Curtis' Sons Company,	27 73	28 73	28 73	\$28 73	\$28 73	\$26 73	\$25 73	25 73
Curtis & Pope Lumber Company	25 75	26 75	25 75	26 75	26 75	26 75	25 75	25 75
G. Fuller & Son . . . . .	.....	.....	27 00	26 00	.....	.....	.....	.....

Average.— William Curtis' Sons Company, 8 districts \$27 60
Average.— Curtis & Pope Lumber Company, 8 districts \$26 25

GUY C. EMERSON,
Acting Supt. of Supplies.

SUPPLY DEPARTMENT.

EXPENDITURES FOR THE FISCAL YEAR 1908-09.

January	\$591 34
February	587 31
March	792 07
April	214 83
May	534 33
June	734 62
July	676 47
August	801 18
September	1,040 75
October	836 94
November	881 20
December	1,506 37
January 31	200 00
Total	<u>\$9,397 41</u>

Appropriation for 1908-09	\$12,500 00
Collecting Department, return of car tickets	50 00
	<u>\$12,550 00</u>
Expenditures, 1908-09	9,397 41
	<u>\$3,152 59</u>
Balance returned	



ANNUAL REPORT
OF THE
TREASURY DEPARTMENT
FOR THE FINANCIAL YEAR 1908-1909.

CITY OF BOSTON, TREASURY DEPARTMENT,
CITY HALL, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— I herewith transmit the annual report of the transactions of the Treasury Department, which includes the receipts and payments of the City of Boston and of the County of Suffolk for the financial year beginning February 1, 1908, and terminating January 31, 1909.

I append a statement of the debt of the City of Boston and the County of Suffolk, and of the Trust Funds in the custody of the Treasurer.

Respectfully submitted,

CHARLES H. SLATTERY,
City Treasurer.

ANNUAL REPORT OF THE CITY TREASURER FOR THE FINANCIAL YEAR 1908-1909, WHICH ENDED JANUARY 31, 1909.

Balance of cash on hand February 1, 1908, brought from the financial year 1907-1908			\$2,712,713 58
RECEIPTS.			
Received during the year 1908-1909 on account of the City of Boston from:			
City Collector.....		\$30,822,206 17	
City Debt issued 1908-1909:			
Bath Department:			
Bath House, North End, 4%...	\$20,000 00		
Boston Infirmary Department:			
Wharf, Long Island, 4%.....	16,500 00		
Children's Institutions Depart- ment:			
School Building, Parental School, West Roxbury, 4%...	50,000 00		
Consumptives' Hospital Depart- ment:			
Hospital for Consumptives, additional, 4%	25,000 00		
Buildings and Equipment, 4%.	17,000 00		
Engineering Department:			
Chelsea Bridge, 4%	75,000 00		
Huntington Avenue Bridge, 4%.	55,000 00		
Massachusetts Avenue Bridge, 4%	40,000 00		
Congress Street Bridge, 4% . . .	35,000 00		
Fire Department:			
New Fire Boat, additional, 4%..	20,000 00		
Hospital Department:			
Emergency Hospital, East Bos- ton, Equipment, 4%.....	13,000 00		
Law Department:			
Washington Street, West Rox- bury (chapter 574, Acts 1907), 4%.....	25,000 00		
Park Department:			
Savin Hill Park, 4%	35,000 00		
Public Buildings Department:			
City Building, Adams and Arca- dia Streets, Addition, 4% . . .	6,500 00		
Rapid Transit:			
Boston Tunnel and Subway, 4%.	2,000,000 00		
School Committee:			
Land and Buildings for Schools, 4%	1,000,000 00		
Streets:			
Cambridge Bridge, 3½%	1,800 00		
Separate Systems of Drainage, 4%	655,000 00		
Sewerage Loan, 4%	300,000 00		
Street Laying-Out Department:			
Atlantic Avenue Extension, 4%.	8,900 00		
Northern Avenue and Sleeper Street, 4%	100,000 00		
Premium on Loans Negotiated.....		4,498,700 00	
Board of Commissioners of Sinking Funds:		284,583 60	
Cancellation of Debt.....	\$272,000 00		
Redemption of Debt.....	46,000 00		
		318,000 00	
Carried forward.....		\$35,923,489 77	\$2,712,713 58

<i>Brought forward</i>		\$35,923,489 77	\$2,712,713 58
Interest on Bank Deposits:			
General Account.....	\$53,810 92		
Franklin Fund.....	182 99		
Franklin Union Andrew Carnegie Donation.....	587 92		
John Foster Trust Fund.....	8 05		
Burnham City Hospital Trust Fund.....	1,476 15		
		56,066 03	
Interest Tailings Account.....		991 90	
Pay Roll Tailings, Settlements with Cashier for parties unpaid.....		17,524 26	
Temporary Loans:			
4 $\frac{7}{8}$ %.....	\$1,500,000 00		
3 $\frac{1}{2}$ %.....	1,500,000 00		
3 $\frac{1}{4}$ %.....	650,000 00		
2 $\frac{1}{2}$ %.....	1,000,000 00		
2 $\frac{3}{8}$ %.....	750,000 00		
2 $\frac{1}{8}$ %.....	1,000,000 00		
		6,400,000 00	
Trust Funds:			
Franklin Fund, sale of securities:			
Principal.....	\$244,719 30		
Interest.....	2,034 85		
		246,754 15	
City Hospital Funds:			
M. H. T. Carter Fund, Income ..		80 00	
Public Library Funds:			
Patrick F. Sullivan Fund.	\$5,000 00		
School Funds:			
Sherwin School Graduates Fund,	32 00		
		5,032 00	
		\$42,649,938 11	
On Account of the County of Suf- folk:			
City Collector.....	\$280,128 68		
Pay Roll Tailings.....	1,484 73		
		281,613 41	
			42,931,551 52
Total Receipts.....			\$45,644,265 10

PAYMENTS

MADE ON ACCOUNT OF THE CITY OF BOSTON DURING THE FINANCIAL YEAR 1908-1909.

On Mayor's drafts charged to the following appropriations:			
Art Department.....			\$310 88
Assessing Department.....			175,058 31
Auditing Department.....			40,092 80
Bath Department:			
Bath Department.....	\$174,750 74		
Bath House, North End.....	63,754 09		
			238,504 83
Board of Aldermen.....			26,278 35
Building Department:			
Department Expenses.....	\$101,726 18		
Board of Appeal.....	3,930 64		
			105,656 82
Cemetery Department.....			77,164 67
City Clerk Department.....			46,591 51
City Council:			
City Council Proceedings.....	\$18,558 73		
Incidental Expenses.....	9,764 55		
			28,323 28
City Debt Requirements:			
City Debt.....	\$1,506,240 00		
Interest.....	3,193,661 84		
			4,699,901 84
City Loans, Redemption of:			
Redemption of City Debt Proper..	\$36,000 00		
Redemption of Cochituate Water Debt.....	282,000 00		
			318,000 00
City Messenger Department.....			34,998 53
Clerk of Committees Department...			16,467 94
Collecting Department.....			124,019 53
Common Council.....			30,476 46
Consumptives' Hospital Department:			
Department Expenses.....	\$74,605 11		
Buildings and Equipment.....	14,761 68		
Hospital for Consumptives.....	98,523 30		
			187,890 09
Damages by Dogs, etc.....			1,966 55
Election Department.....			164,214 50
Engineering Department.....			78,081 56
Finance Commission.....			64,904 80
Fire Department:			
Department Expenses.....	\$1,513,229 27		
Engine 6 House, Addition.....	1,864 03		
House and Apparatus, Parker Hill..	27 90		
House, Land and Apparatus, Forest Hills.....	27 90		
House, Land and Apparatus, Orient Heights.....	30 90		
Ladder 1 House, Rebuilding.....	3,022 66		
New Fire Boat.....	33,830 76		
			1,552,033 42
Franklin Fund.....			236,448 56
Franklin Union.....			6,220 81
Health Department.....			206,240 14
Highways, Making of.....			171,100 74
Hospital Department:			
Hospital Department.....	\$551,958 13		
Bradley Fund.....	850 00		
Emergency Hospital, East Boston..	19,612 73		
Hospital Buildings, Improvements..	76 21		
Lamont G. Burnham Ward.....	95,659 15		
Ward Building for Measles.....	48,675 39		
Emergency Hospital, East Boston, Equipment.....	4,883 78		
			721,715 39
Institutions:			
Children's Institutions Department:			
Placing-out and Office Division..	\$108,669 93		
Parental School.....	59,757 88		
Carried forward.....	\$168,427 81		\$9,352,662 31

<i>Brought forward</i>	\$168,427 81	.....	\$9,352,662 31
Institutions — <i>Continued</i> :			
Sawyer Marcella Street Home			
Fund, Income.....	231 53		
Suffolk School for Boys.....	43,481 70		
		\$212,141 04	
Insane Hospital Department:			
Boston Insane Hospital.....		160,938 46	
Institutions Registration Department.....		23,279 82	
Boston Infirmary Department:			
Boston Almshouse and Hospital,			
Long Island.....	\$145,379 56		
Almshouse, Charlestown.....	16,980 45		
Epileptics, etc., Care of.....	32,586 33		
Pauper Expenses.....	5,338 22		
Office Expenses.....	4,419 20		
Steamer "John Howard".....	8,626 70		
Wharf, Long Island.....	15,639 41		
		228,969 87	
Steamer "Monitor".....		22,594 10	
			647,923 29
Law Department:			
Law Department.....	\$44,254 63		
Codification of Statutes.....	7,274 17		
			51,528 80
Library Department:			
Library Department.....	\$310,258 00		
Library Department, Trust Funds,			
Income.....	17,475 69		
			327,733 69
Market Department.....			10,905 07
Mayor:			
Mayor.....	\$52,325 13		
Public Celebrations.....	26,978 17		
			79,303 30
Music Department.....			14,999 82
Overseeing of the Poor Department..			143,887 40
Park Department:			
Park Department.....	\$309,008 32		
Castle Island, Sanitary.....	662 66		
Charlestown Playground, Gymnas-			
tic Apparatus.....	2,424 34		
Cottage Street Playground, Gym-			
nastic Apparatus, Lockers, etc..	4,307 97		
First Street Playground, Lockers			
and Gymnastic Apparatus.....	2,236 15		
Franklin Field, Locker Buildings,	21,298 60		
Marcella Street Playground, Gym-			
nastic Apparatus and Shower			
Baths.....	499 22		
Marine Park, Pier Head, Comple-			
tion of.....	822 91		
North Brighton Playground, Gym-			
nasium, etc.....	5,674 82		
Playground, Wards 7 and 9.....	456 93		
Playground, Ward 22.....	1,699 20		
Savin Hill Playground, Grading			
and Improving.....	5,000 00		
Speedway, Franklin Field, Comple-			
tion of.....	2,352 24		
			356,443 36
Phillips Street Fund, Income.....			1,269 50
Police Department:			
Police Department.....	\$2,052,660 66		
Licensing Board.....	34,604 53		
Police Charitable Fund, Income...	7,518 99		
			2,094,784 18
Printing Department.....			209,059 69
Public Buildings Department:			
Public Buildings Department.....	\$210,491 08		
City Buildings, Adams and Arcadia			
Streets, Addition.....	5,197 28		
			215,688 36
Public Grounds Department:			
Public Grounds Department.....	\$131,985 45		
Highland Park, Improvement of..	112 09		
			132,097 54
Randidge Trust Fund, Income.....			~~2,235 63~~
<i>Carried forward</i>			\$13,640,521 94

<i>Brought forward</i>			\$13,640,521 94
Rapid Transit:			
Rapid Transit.....	\$16,241 46		
Rapid Transit, Interest and Sinking Fund.....	385,061 85		
Boston Tunnel and Subway.....	1,671,245 28		
Boston Tunnel and Subway, Interest on Debt.....	256,856 83		
Riverbank Subway, Interest on Debt.....	161 51		
Riverbank Subway.....	213 79		
Investigation of Congestion of Traffic, etc.....	206 03		
Registry Department.....			2,329,986 75
Reserve Fund.....			34,988 94
Schools:			63,834 02
Schoolhouses.....	\$3,900 00		
School Committee.....	3,574,967 88		
Franklin Medal Fund, Income....	37 90		
Gibson School Fund, Income.....	2,746 99		
Horace Mann School Fund, Income,	102 35		
Land and Buildings for Schools...	771,019 50		
Physical Education.....	44,644 10		
Pensions to Teachers.....	1,678 50		
Schoolhouse Department.....	333,282 10		
Sidewalk Assessments, Repayment of,			4,732,379 32
Sinking Funds Department.....			83 70
Soldiers' Relief Department.....			2,385 17
Statistics Department.....			247,659 70
Street Department:			11,153 99
Street Department.....	\$833,897 95		
Bridge Division.....	198,795 55		
Ferry Division.....	249,068 39		
Lamp Division.....	809,510 06		
Sanitary Division.....	745,169 90		
Sewer Division.....	351,111 18		
Street Cleaning and Watering Division.....	573,955 21		
Streets:		\$3,761,508 24	
Abolishment of Grade Crossings...	\$62,913 59		
Boylston Street Bridge.....	60,000 00		
Cambridge Bridge.....	4,509 09		
Chelsea Bridge, South Draw, Reconstruction of.....	656 75		
Chelsea Street Bridge.....	10,295 22		
Congress Street Bridge.....	10,208 31		
Huntington Avenue Bridge.....	417 74		
Massachusetts Avenue Bridge....	20,492 70		
Meridian Street Bridge, Improvement of.....	2,012 08		
Separate Systems of Drainage....	599,973 76		
Sewerage Works.....	322,468 79		
Street Improvements.....	177,566 28		
Old Colony Avenue, Construction of.....	7,577 39		
Street Laying-Out Department:		1,279,091 70	
Street Laying-Out Department...	\$76,531 80		
Atlantic Avenue Extension (chapter 466, Acts 1899).....	1,861 96		
Brandon Street and Belgrade Ave.	780 11		
Hyde Park Avenue.....	7,910 64		
Northern Avenue and Sleeper St.	197,678 67		
Washington Street, West Roxbury (chapter 574, Acts 1907).....	22,610 00		
Supply Department.....		307,373 18	
Temporary Loan:		9,397 41	
1907-1908.....		\$1,000,000 00	5,357,370 53
1908-1909.....		6,400,000 00	
Treasury Department.....			7,400,000 00
Water Department:			49,130 47
Water Department.....	\$729,677 14		
Interest on Debt.....	175,010 17		
<i>Carried forward</i>	\$904,687 31		\$33,869,494 53

<i>Brought forward</i>	\$904,687 31		\$33,869,494 53
Water Rates, Refunded.....	1,757 85		
Weights and Measures Department..			906,445 16
Wire Department.....			22,992 12
Refunds:			54,662 45
Blue Hill and Other Avenues, Assessments Protested.....	\$2,895 96		
Duplicate and Overpayments to City Collector.....	970 55		
Highways, Making of, Assessments Protested.....	1,633 36		
Liquor License Revenue Refunded	63,560 82		
Residue Tax Sales.....	226 33		
Tax Titles.....	92 10		
Taxes Refunded.....	9,876 87		
			79,255 99
Total payments on Mayor's drafts, Amounts paid, but not drawn for by Mayor through the Auditor's office, charged to the following accounts:			\$34,932,850 25
Commonwealth of Massachusetts:			
State Tax	\$1,978,350 00		
Corporation Tax	3 17		
National Bank Tax	548,680 99		
National Bank Tax, Interest on ..	5 57		
Abolition of Grade Crossings:			
Sinking Fund.....	114,890 41		
Interest.....	14,264 31		
Abolition of Grade Crossings, Tre- mont Street, Boston, and Hyde Park:			
Sinking Fund.....	31,851 06		
Interest.....	9,884 77		
Armory Loan:			
Interest.....	7,150 00		
Metropolitan Park Loan:			
Sinking Fund.....	71,750 39		
Interest.....	200,506 59		
Cost of maintenance.....	255,171 70		
Metropolitan Park Loan, Series 2:			
Sinking Fund.....	14,356 29		
Interest.....	41,055 19		
Cost of maintenance.....	35,037 00		
Metropolitan Park Loans:			
Nantasket, cost of maintenance .	14,572 11		
Wellington Bridge, cost of main- tenance.....	2,133 80		
Metropolitan Sewer Loans:			
North system:			
Sinking Fund.....	8,976 71		
Interest.....	31,475 46		
Cost of maintenance.....	34,809 09		
South system:			
Sinking Fund.....	21,873 97		
Interest.....	117,814 03		
Cost of maintenance.....	47,146 48		
Metropolitan Water Loan:			
Sinking Fund.....	409,349 58		
Interest.....	1,129,390 21		
Cost of maintenance.....	250,576 05		
Liquor License Revenue.....	363,155 03		
		\$5,754,229 96	
Board of Commissioners of Sinking Funds:			
Revenue collected.....	\$315,250 68		
Premium on loans.....	284,583 60		
		599,834 28	
Interest tailings.....		1,384 40	
Old claims, city account.....		902 83	
Pay roll tailings (payments by Cashier to parties not paid by Paymaster)		15,673 65	
Sidewalk Assessments, Repayment of, Tailings		89 91	
<i>Carried forward</i>		\$6,372,115 03	\$34,932,850 25

<i>Brought forward</i>		\$6,372,115 03	\$34,932,850 25
Trust Funds:			
Investments in City of Boston Bonds:			
Cemetery Trust Funds:			
Dorchester North Burial Ground.....	\$1,000 00		
Evergreen Cemetery Trust Fund.....	1,400 00		
Mt. Hope Cemetery Trust Fund.....	5,400 00		
Franklin Union, Andrew Carnegie Donation, income.....	26,082 00		
		33,882 00	
Income, etc.:			
City Hospital Funds:			
M. H. T. Carter Fund.....		80 00	
Principal:			
Franklin Union, Andrew Carnegie Donation.....		396 48	
			6,406,473 51
Total payments on city account...			<u>\$41,339,323 76</u>
<i>County of Suffolk.</i>			
Paid during the financial year 1908-1909, as allowed and certified by the Auditor of the City of Boston acting as Auditor of the County of Suffolk, under authority of section 44, chapter 21, Revised Laws:			
County Buildings.....		\$51,388 03	
Courthouse.....		36,426 30	
Jail.....		66,750 67	
Supreme Judicial Court.....		34,513 82	
Superior Court, Civil Session.....		317,787 41	
Superior Court, Criminal Session....		158,234 21	
Probate Court and Office.....		31,104 95	
Municipal Court, Civil Session.....		26,431 74	
Municipal Court, Criminal Session...		105,911 20	
Municipal Court, Charlestown.....		10,153 47	
East Boston District Court.....		9,127 27	
Municipal Court, South Boston.....		12,470 55	
Municipal Court, Dorchester District,		8,002 78	
Municipal Court, Roxbury District,		17,658 82	
Municipal Court, West Roxbury District.....		7,417 83	
Municipal Court, Brighton District..		5,504 71	
Boston Juvenile Court.....		10,634 90	
Police Court, Chelsea.....		14,040 26	
Registry of Deeds.....		59,276 66	
Insanity cases.....		22,020 68	
Medical examinations.....		17,124 21	
Miscellaneous expenses.....		11,452 72	
House of Correction, Deer Island...		195,550 16	
House of Correction, Deer Island, machinery, materials, etc.....		57,934 49	
Land Court.....		2,253 66	
Naturalization Fees.....		1,000 00	
New House of Correction.....		959 18	
Penal Institutions, office expenses...		19,920 27	
Wall, etc., Deer Island.....		5,137 61	
County Loans, Redemption of.....		21,000 00	
County Debt, Sinking Fund Requirements.....		41,018 00	
Interest on County Debt.....		126,225 00	
Award to wife, neglect to support..		150 00	
Bail refunded.....		50 00	
Bounty on seals.....		3 00	
County fines to complainant.....		914 40	
Old claims.....		115 00	
Pay Roll tailings.....		511 04	
			\$1,506,175 00
Total payments on account of the County of Suffolk.....			<u>\$1,506,175 00</u>

RECAPITULATION.			
Cash balance, February 1, 1908.....			\$2,712,713 58
Receipts from February 1, 1908, to January 31, 1909, both inclusive:			
Account of City of Boston:			
City Collector.....	\$30,822,206 17		
Temporary loans.....	6,400,000 00		
Board of Commissioners of Sinking Funds:			
For redemption of matured debt,	46,000 00		
For cancellation of debt.....	272,000 00		
City loans issued.....	4,498,700 00		
Other sources.....	611,031 94		
		\$42,649,938 11	
Account of County of Suffolk:			
City Collector.....	\$280,128 68		
Other sources.....	1,484 73		
		281,613 41	
			42,931,551 52
			\$45,644,265 10
Payments from February 1, 1908, to January 31, 1909, both inclusive:			
Account of City of Boston:			
General draft.....	\$12,460,125 93		
Pay Roll draft.....	12,706,614 15		
Special drafts.....	9,766,110 17		
	\$34,932,850 25		
Amounts not drawn for by Mayor through Auditor's office.....	6,406,473 51		
		\$41,339,323 76	
Account of County of Suffolk:			
General payments.....	\$1,349,555 52		
Special drafts.....	154,876 04		
Other amounts.....	1,743 44		
		1,506,175 00	
			42,845,498 76
Cash balance, January 31, 1909, carried forward to financial year 1909-1910,.....			\$2,798,766 34

INTEREST PAID IN 1908-1909.

On General City Debt			\$3,193,661 84
On Water Debt			175,010 17
On County Debt			126,225 00
On Rapid Transit Debt	\$269,275 00		
On Boston Tunnel and Subway Debt	256,856 83		
On Riverbank Subway Debt	161 51		
		526,293 34	
Total interest paid on City and County Debt			\$4,021,190 35
Assessments for interest on State Debt paid in 1908-1909:			
On abolition of Grade Crossing Debt:			
Abolition of Grade Crossings,	\$14,264 31		
Abolition of Grade Crossings,			
Tremont street, Boston, and			
Hyde Park	9,884 77		
		\$24,149 08	
On Armory Loan		7,150 00	
On Metropolitan Park Loan:			
Parks, Series 1	\$200,506 59		
Parks, Series 2	41,055 19		
		241,561 78	
On Metropolitan Sewer Loan:			
North System	\$31,475 46		
South System	117,814 03		
		149,289 49	
On Metropolitan Water Loan		1,129,390 21	
			1,551,540 56
Total interest paid, 1908-1909			\$5,572,730 91

BALANCE SHEET OF THE TREASURY DEPARTMENT, JANUARY 31, 1909.

Dr. CHARLES H. SLATTERY, CITY TREASURER. Cr.

To balance carried forward to financial year 1909-1910:			
Special appropriations, money derived from loans.....	\$1,772,135 61		
Special appropriations, money derived from revenue, income, etc.....	118,963 92		
General appropriations.....	293,153 60		
	\$2,184,253 13		
Less advances, abolishment of grade crossings.....	54,766 44		
	\$2,129,486 69		
Excess of Actual Income for Financial Year.....	401,039 82		\$2,530,526 51
Bay State Gas Company, Guarantee Fund, Blue Hill and Other Avenues, assessments protested.....	\$1,328 00		
Board of Commissioners of Sinking Funds, Revenue.....	13,972 14		
Burnham Hospital Building Fund.....	42,286 73		
Carleton street, Betterments Protested.....	9,192 11		
City Debt, due prior to February 1, 1909.....	1,106 60		
Daniel Preston Lot.....	1,000 00		
Dorchester North Burial Ground Trust Fund.....	381 15		
Dorchester South Cemetery Trust Fund.....	56 00		
Dorchester street, Protested Betterments.. Duplicate and Overpayments to City Collector.....	48 00		
Evergreen Cemetery Trust Fund.....	831 98		
John Foster Trust Fund.....	25,321 44		
Franklin Fund.....	86 31		
Franklin Union, Andrew Carnegie Donation, Income.....	468 28		
Franklin Park Betterments, Repayments of, Gibson School Fund.....	17,469 70		
	11,006 47		
	238 22		
	15 43		
By cash deposited in banks, trust companies and office:			
Atlantic National Bank.....			\$35,380 60
Boylston National Bank.....			12,193 75
Commercial National Bank.....			20,745 99
Eliot National Bank.....			23,008 25
Faneuil Hall National Bank.....			40,431 93
First National Bank.....			153,639 60
First Ward National Bank.....			14,197 61
Fourth National Bank.....			35,474 62
Merchants National Bank.....			56,724 65
Merchants National Bank, Sidewalk Assessments, Tailings Account.....			5,032 42
Metropolitan National Bank.....			37,508 56
National Bank of Commerce.....			70,827 37
National Market Bank of Brighton.....			14,188 42
National Rockland Bank.....			25,465 43
National Security Bank.....			25,321 68
National Security Bank, Pay Roll Tailings Account.....			36,167 47
National Shawmut Bank.....			166,663 68
National Union Bank.....			60,862 27
New England National Bank.....			61,011 76
Old Boston National Bank.....			61,062 40
People's National Bank.....			25,315 68
Second National Bank.....			156,159 77
South End National Bank.....			10,016 44
State National Bank.....			238,398 87
Webster and Atlas National Bank, Account No. 1.....			4,032 21
Webster and Atlas National Bank, Account No. 2.....			4,094 35
Webster and Atlas National Bank, Account No. 3.....			
Winthrop National Bank.....			40,846 74
American Trust Company.....			21,173 52
Bay State Trust Company.....			47,907 99
Beacon Trust Company.....			20,294 56
			12,255 49

TREASURY DEPARTMENT.

[illegible]

NEW DEBT ISSUED DURING THE FINANCIAL YEAR 1908-1909.

Date of Authority of Issue.	Rate per cent.	OBJECT OF LOAN.	Amount of Issue.	Date Payable.
July 26, 1907.....	4	Various Municipal Purposes, Public Park Loan.....	\$35,000 00	July 1, 1927.
December 28, 1907.....	4	Consumptives' Hospital Department, Buildings and Equipment..	17,000 00	April 1, 1928.
" "	4	Wharf, Long Island.....	16,500 00	June 1, 1928.
May 25, 1908.....	4	Various Municipal Purposes.....	364,500 00	" " "
Chapter 450, Acts of Massachusetts, 1907.....	4	Land and Buildings for Schools.....	1,000,000 00	" " "
" 381, " 1903.....	4	Northern Avenue and Sleeper Street.....	100,000 00	June 1, 1938.
" 426, " 1897.....	4	Sewerage Works.....	300,000 00	" " "
May 25, 1908.....	4	Separate Systems of Drainage.....	655,000 00	" " "
Chapter 466, Acts of Massachusetts, 1899.....	4	Atlantic Avenue Extension.....	8,900 00	October 1, 1938.
" 534, " 1902.....	4	Boston Tunnel and Subway.....	2,000,000 00	June 1, 1948.
" 467, " 1898.....	3½	Cambridge Bridge Loan.....	1,800 00	January 1, 1949.
			<u>\$4,498,700 00</u>	

DEBT PAID AND CANCELLED DURING FINANCIAL YEAR 1908-1909.

Date of Authority of Issue.	Rate per cent.	OBJECT OF LOAN.	Date of Maturity.	Amount Due.	Amount Paid.	Totals.
November 21, 1898.....	3½	Various Municipal Purposes.....	October 1, 1908...	\$36,000 00	\$36,000 00	\$36,000 00
September 16, 1885.....	3	Suffolk County Courthouse.....	" "	17,000 00	\$17,000 00	17,000 00
April 20, 1878.....	5	Additional Supply of Water.....	April 1, 1908.....	10,000 00	\$10,000 00	
April 11, 1879.....	4	" "	July 1, 1909.....	.....	1,000 00	
" "	4½	" "	October 1, 1909...	.....	148,000 00	
March 20, 1880.....	4	New Main.....	April 1, 1910.....	.....	1,000 00	
October 15, 1887.....	4	Extension of Mains.....	October 1, 1917...	.....	1,000 00	
November 13, 1889....	4	Additional Supply of Water.....	October 1, 1919...	.....	1,000 00	
" "	4	" "	October 1, 1920...	.....	9,000 00	
" "	3½	Extension of Mains.....	November 30, 1919,	.....	1,000 00	
January 23, 1892.....	4	" "	January 1, 1922...	.....	20,000 00	
April 26, 1893.....	4	Additional Supply of Water.....	October 1, 1924...	.....	90,000 00	282,000 00
Chapter 534, 1906.....	3½	Suffolk County Courthouse, Addition.....	.....	\$4,000 00	\$4,000 00	\$335,000 00
						\$4,000 00

DEBT OF THE CITY OF BOSTON,

Issued WITHIN THE DEBT LIMIT fixed by Section 3 of Chapter 27
of the Revised Laws.

FIFTEEN-YEAR DEBT.

“Fifteen-Year Debt” of the City of Boston, to be paid as it becomes due from the resources of the “Fifteen-Year Sinking Fund.” The dates show when the debt becomes due.

1921.	July	1.	Street Improvements,	4	\$500,000 00	
	“	1.	Columbus Avenue, Asphaltting,	4	150,000 00	
1922.	Jan.	1.	Street Improvements,	3½	250,000 00	
Total, Financial Year, 1921-1922,						\$900,000 00
1922.	July	1.	Street Improvements,	4		400,000 00
Total Debt,						<u>\$1,300,000 00</u>

HIGHWAYS, MAKING OF, DEBT, No. 1.

“Highways, Making of, Debt,” of the City of Boston, to be paid as it becomes due from the resources of the “Highways, Making of, Sinking Fund No. 1.” The dates show when the debt becomes due.

1912.	July	1.	Laying Out and Construction of Highways,	4	\$31,000 00	
	Oct.	1.	Laying Out and Construction of Highways,	4	243,200 00	
1913.	Jan.	1.	Laying Out and Construction of Highways,	4	150,000 00	
Total, Financial Year, 1912-13,						\$424,200 00
1922.	June	1.	Construction of Highways already laid out,	3½	\$300,000 00	
	“	1.	Laying Out and Construction of Highways,	3½	200,000 00	
	Oct.	1.	Laying Out and Construction of Highways,	3½	3,700 00	
Total, Financial Year, 1922-23,						503,700 00
1927.	July	1.	Highways, Making of,	4		250,000 00
1931.	April	1.	Laying Out and Construction of Highways (chapter 478, Acts 1900),	3	\$300,000 00	
	July	1.	Laying Out and Construction of Highways (chapter 478, Acts 1900),	3½	500,000 00	
	“	1.	Construction of Highways already laid out,	3½	100,000 00	
	Oct.	1.	Laying Out and Construction of Highways (chapter 478, Acts 1900),	3	100,000 00	
	“	1.	Laying Out and Construction of New High- ways,	3	100,000 00	
1932.	Jan.	1.	Laying Out and Construction of New Highways,	3	83,000 00	
	“	1.	Laying Out and Construction of Highways (chapter 478, Acts 1900),	3	126,000 00	
Total, Financial Year, 1931-32,						1,309,000 00
1932.	April	1.	Laying Out and Construction of Highways,	3	\$56,300 00	
	June	1.	Laying Out and Construction of Highways,	3½	195,000 00	
	Oct.	1.	Laying Out and Construction of Highways (chapter 478, Acts 1900),	3½	5,001 00	
Total, Financial Year, 1932-33,						256,301 00
Carried forward,						<u>\$2,743,201 00</u>

		<i>Brought forward,</i>		\$2,743,201 00
1934.	June 1.	Highways, Making of (chapter 199, Acts 1900),	3½	600,000 00
1935.	Dec. 1.	Highways, Making of,	3½	250,000 00
1936.	July 1.	Highways, Making of,	4	500,000 00
		Total Debt,		<u>\$4,093,201 00</u>

PUBLIC PARK DEBT.

"Public Park Debt" of the City of Boston, to be paid as it becomes due from the resources of the "Public Park Sinking Fund." The dates show when the debt becomes due.

1909.	Dec. 1.	Rogers Park, Drainage,	3½		\$2,000 00
1913.	Jan. 1.	East Boston Park,	4	\$50,000 00	
	" 1.	Arnold Arboretum,	4	60,000 00	
	" 1.	Franklin (<i>West Roxbury</i>) Park,	4	233,000 00	
		Total, Financial Year, 1912-13,			343,000 00
1913.	April 1.	Playstead, North Brighton,	4	\$25,000 00	
	" 1.	Muddy River Improvement,	4	119,000 00	
	" 1.	City Point Park,	4	209,000 00	
	" 1.	Charles River Embankment,	4	285,000 00	
	" 1.	Franklin (<i>West Roxbury</i>) Park,	4	300,000 00	
1914.	Jan. 1.	Franklin (<i>West Roxbury</i>) Park,	4	500,000 00	
		Total, Financial Year, 1913-14,			1,438,000 00
1914.	April 1.	Muddy River Improvement,	4	\$75,000 00	
	Oct. 1.	Public Parks,	4	500,000 00	
		Total, Financial Year, 1914-15,			575,000 00
1915.	Oct. 1.	City Point Park,	3¼	\$13,000 00	
	" 1.	Charles River Embankment,	3¼	16,000 00	
1916.	Jan. 1.	Strandway from Marine Park, West,	4	7,000 00	
	" 1.	Public Park, Construction,	4	100,000 00	
		Total, Financial Year, 1915-16,			136,000 00
1916.	April 1.	Bussey Park and Arnold Arboretum,	3½	\$20,000 00	
	" 1.	Strandway from Marine Park, West,	4	3,000 00	
	July 1.	Strandway from Marine Park, West,	4	90,000 00	
	" 1.	Playstead, Neponset,	4	15,000 00	
	Oct. 1.	Charles River Embankment,	3½	55,000 00	
	Nov. 30.	Playground, Fellows Street,	4	2,000 00	
	" 30.	Playground, First Street,	4	5,000 00	
1917.	Jan. 1.	Playground, Freeport Street,	4	4,000 00	
		Total, Financial Year, 1916-17,			194,000 00
1917.	April 1.	Playground, Billings Field,	4	\$2,000 00	
	July 1.	Playground, Billings Field,	4	18,000 00	
	" 1.	Playground, North End,	4	100,000 00	
	" 1.	Playground, Gibson Street,	3½	37,500 00	
	" 1.	Playground, Ward 3,	3½	50,000 00	
	Oct. 1.	Playground, Billings Field, Construction,	4	2,500 00	
	" 1.	Playground, Fellows Street, Additional Land,	4	15,000 00	
	" 1.	Playground, Neponset, Construction,	4	4,500 00	
	" 1.	Playground, Ward 14,	4	5,000 00	
		Total, Financial Year, 1917-18,			234,500 00
1919.	April 1.	Various Playgrounds,	3½	\$37,500 00	
	Dec. 1.	Playground, Billings Field,	3½	27,060 98	
		Total, Financial Year, 1919-20,			64,560 98
1921.	Jan. 1.	Playground, Construction,	3	\$25,000 00	
	" 1.	Speedway, Franklin Park,	3	25,000 00	
		Total, Financial Year, 1920-21,			50,000 00
		<i>Carried forward,</i>			<u>\$3,037,060 98</u>

<i>Brought forward,</i>					\$3,037,060 98
1921.	July	1.	Public Parks,	3	\$21,000 00
	Oct.	1.	Strandway, Purchase of Land, etc.,	3	50,000 00
	"	1.	Billings Field, Construction,	3	10,000 00
1922.	Jan.	1.	Gymnasium, First Street Playground,	3	9,550 00
Total, Financial Year, 1921-22,					90,550 00
1922.	June	1.	Strandway, Purchase of Land, etc.,	3½	\$75,000 00
	Oct.	1.	Public Parks,	3½	25,000 00
1923.	Jan.	1.	Public Park,	3½	30,000 00
	"	1.	Playground, Ward 2,	3½	25,000 00
Total, Financial Year, 1922-23,					155,000 00
1923.	April	1.	Charlestown Playground, "Gym.," etc.,	3½	\$7,500 00
	"	1.	Mystic Playground, "Gym.," etc.,	3½	2,500 00
	"	1.	Columbus Avenue Playground, Sanitary, etc.,	3½	10,000 00
	"	1.	Ashmont Playground, Grading, etc.,	3½	4,000 00
	"	1.	Dorchester Park, Open-air Gymnasium,	3½	2,000 00
	"	1.	Neponset Playground, Sanitary, etc.,	3½	5,000 00
	"	1.	First Street Playground, House, etc.,	3½	6,000 00
	"	1.	Castle Island, Sanitary,	3½	3,000 00
	"	1.	Wood Island Park, Sanitary and Shelter,	3½	10,000 00
	June	1.	Strandway, Purchase of Land, etc.,	3½	100,000 00
	"	1.	Public Park and Construction,	3½	100,000 00
	Oct.	1.	Playground, Wards 7 and 9,	3½	30,000 00
Total, Financial Year, 1923-24,					280,000 00
1924.	July	1.	Public Park, Wards 6 and 7,	4	\$100,000 00
	Oct.	1.	Public Park, Wards 6 and 7,	4	100,000 00
Total, Financial Year, 1924-25,					200,000 00
1925	April	1.	Public Park, Wards 6 and 7,	4	\$50,000 00
	Oct.	1.	Public Park, Wards 6 and 7,	4	208,000 00
	Dec.	1.	Strandway, Purchase of Land, etc.,	3½	13,000 00
1926.	Jan.	1.	Commonwealth Park, Sanitary, etc.,	3½	10,000 00
Total, Financial Year, 1925-26,					281,000 00
1926.	July	1.	Public Park, Wards 6 and 7,	4	\$11,300 00
1927.	Jan.	1.	Strandway, Purchase of Land, etc.,	3½	3,500 00
Total, Financial Year, 1926-27,					14,800 00
1927.	July	1.	Charlestown Playground, "Gym.," etc.,	4	\$3,000 00
	"	1.	First Street Playground, "Gym.," etc.,	4	4,500 00
	"	1.	Franklin Field, Locker Building, etc.,	4	25,000 00
	"	1.	Charlesbank, Addition to Building, etc.,	4	5,000 00
	"	1.	Savin Hill Playground, Grading, etc.,	4	5,000 00
	"	1.	Marcella Street Playground, "Gym.," etc.,	4	4,500 00
	"	1.	Cottage Street Playground, "Gym.," etc.,	4	5,000 00
	"	1.	Savin Hill Park,	4	35,000 00
Total, Financial Year, 1927-28,					87,000 00
1929.	April	1.	Playgrounds,	3½	\$151,000 00
	July	1.	Playgrounds,	3½	49,000 00
1930.	Jan.	1.	Chestnut Hill Park,	3½	75,000 00
Total, Financial Year, 1929-30,					275,000 00
1930.	July	1.	Playgrounds,	3	\$154,000 00
	"	1.	Playgrounds,	3½	46,000 00
1931.	Jan.	1.	Public Park, Construction,	3	100,000 00
Total, Financial Year, 1930-31,					300,000 00
1932.	Jan.	1.	Public Parks,	3	131,000 00
1932.	June	1.	Playgrounds,	3½	\$100,000 00
	"	1.	Chestnut Hill Park,	3½	75,000 00
	July	1.	Playgrounds,	3½	5,000 00
	"	1.	Public Parks,	3½	5,000 00
	Oct.	1.	Playground, Ward 2,	3½	20,000 00
1933.	Jan.	1.	Parks, Brighton,	3½	25,000 00
Total Financial Year, 1932-33,					230,000 00
<i>Carried forward,</i>					\$5,081,410 98

			<i>Brought forward,</i>			\$5,081,410 98
1934.	Oct.	1.	Chestnut Hill Park,	3½	\$36,300 00	
	"	1.	Strandway, Purchase of Land and Con-			
			struction of,	3½	63,700 00	
1935.	Jan.	1.	Playground, Wards 7 and 9,	3½	100,000 00	
		-	Playground, Ward 22,	3½	30,000 00	
Total, Financial Year, 1934-35,						230,000 00
1936.	June	1.	Playground, Wards 7 and 9,	3½	170,000 00	
Total Debt,						<u>\$5,481,410 98</u>

RAPID TRANSIT LOAN, CHARLESTOWN BRIDGE DEBT, No. 1.

"Rapid Transit Loan, Charlestown Bridge Debt," issued under chapter 548, Acts of 1894, of the Legislature of Massachusetts, to be paid as it becomes due from the resources of the "Rapid Transit Loan, Charlestown Bridge, Sinking Fund, No. 1." The dates show when the debt becomes due.

1934.	Oct.	1.	Charlestown Bridge,	4	\$10,000 00	
1935.	Oct.	1.	Charlestown Bridge,	4	10,000 00	
1936.	July	1.	Charlestown Bridge,	4	\$30,000 00	
	Oct.	1.	Charlestown Bridge,	4	100,000 00	
						130,000 00
1937.	July	1.	Charlestown Bridge,	3½	\$500,000 00	
1938.	Jan.	1.	Charlestown Bridge,	3½	100,000 00	
						600,000 00
Total Debt,						<u>\$750,000 00</u>

SCHOOLHOUSE DEBT, No. 2.

"Schoolhouse Debt" of the City of Boston, issued under chapter 408, Acts of 1895, chapter 442, Acts of 1897, chapter 149, Acts of 1898, chapter 288 and chapter 473, Acts of 1901, chapter 386, Acts of 1902, and chapter 450, Acts of 1907, of the Legislature of Massachusetts, to be paid as it becomes due from the resources of the "Schoolhouses Sinking Fund, No. 2."

1911.	April	1.	Schoolhouses and Sites,	4	\$500,000 00	
1912.	April	1.	Austin Primary Schoolhouse, Additional			
			Land,	4	\$20,000 00	
	"	1.	Austin Primary Schoolhouse, Building,	4	75,000 00	
	"	1.	Brighton High Schoolhouse, Site and			
			Building,	4	75,000 00	
	"	1.	Cook Schoolhouse, Enlargement of Yard,	4	3,000 00	
	"	1.	Dorchester High Schoolhouse, Land,	4	12,000 00	
	"	1.	Grammar Schoolhouse, Gibson District,			
			Additional Land,	4	500 00	
	"	1.	Grammar Schoolhouse, Hillside District,			
			Grading, etc.,	4	3,500 00	
	"	1.	Grammar Schoolhouse, Pierce District,			
			Heating, etc.,	4	500 00	
	"	1.	Mechanic Arts High School,	4	60,000 00	
	"	1.	Primary Schoolhouse, Adams District,			
			Land,	4	10,500 00	
	"	1.	Primary Schoolhouse, Bunker Hill Dis-			
			trict, Grading, etc.,	4	5,000 00	
	"	1.	Primary Schoolhouse, Dillaway District,			
			Building,	4	40,000 00	
	"	1.	Primary Schoolhouse, Dillaway District,			
			Additional Site,	4	600 00	
	"	1.	Primary Schoolhouse, North of Broadway,	4	25,000 00	
	"	1.	Primary Schoolhouse, Frothingham Dis-			
			trict, Land,	4	31,000 00	
	"	1.	Primary Schoolhouse, George Putnam Dis-			
			trict, Grading, etc.,	4	5,000 00	
	"	1.	Primary Schoolhouse, Hillside District,			
			Grading, etc.,	4	4,000 00	
	"	1.	Primary Schoolhouse, Lowell District,			
			Grading, etc.,	4	6,000 00	
	"	1.	Primary Schoolhouse, Munroe District,			
			Additional Land,	4	925 00	
Carried forward,					\$377,525 00	\$500,000 00

<i>Brought forward,</i>				\$377,525 00	\$500,000 00
1912.	April 1.	Primary Schoolhouse, Oak Square, etc.,	4	12,000 00	
	" 1.	West Roxbury High Schoolhouse, Additional Land,	4	7,400 00	
Total, Financial Year, 1912-13,					396,925 00
1913.	April 1.	Brighton Schoolhouse, New Building,	4	\$15,000 00	
	" 1.	Frothingham Schoolhouse, Wall,	4	4,000 00	
	" 1.	Grammar Schoolhouse, Bowdoin District, Site and Building,	4	100,000 00	
	" 1.	Grammar Schoolhouse, Gibson District,	4	90,000 00	
	" 1.	Primary Schoolhouse, Canterbury and Sharon Streets,	4	40,000 00	
	" 1.	Primary Schoolhouse, Eustis Street, Enlargement Lot,	4	3,600 00	
	" 1.	Primary Schoolhouse, Eustis Street, New Building,	4	40,000 00	
	" 1.	Primary Schoolhouse, Genesee Street,	4	22,500 00	
	" 1.	Primary Schoolhouse, Morton Street,	4	12,000 00	
	" 1.	Primary Schoolhouse, Moulton Street,	4	55,000 00	
	" 1.	Primary Schoolhouse, North of Broadway,	4	5,000 00	
	" 1.	Primary Schoolhouse, Oak Square, etc.,	4	6,000 00	
Total, Financial Year, 1913-14,					393,100 00
1914.	Oet. 1.	Meehanie Arts High School, Furnishing,	4	\$25,000 00	
	" 1.	Primary Schoolhouse, Field's Corner, Site and Building,	4	50,000 00	
	" 1.	Primary Schoolhouse, Genesee Street,	4	65,000 00	
	" 1.	Primary Schoolhouse, Aberdeen District, Site,	4	6,000 00	
	" 1.	Agassiz Schoolhouse, etc.,	4	9,000 00	
	" 1.	Austin Primary Schoolhouse,	4	5,000 00	
	" 1.	Brighton High Schoolhouse,	4	35,000 00	
	" 1.	Cushman Schoolhouse, Enlargement of,	4	36,000 00	
	" 1.	Grammar Schoolhouse, Bowdoin District, Site and Building,	4	30,000 00	
	" 1.	Grammar Schoolhouse, Gibson District,	4	10,000 00	
	" 1.	Grammar Schoolhouse, Stoughton District, Site,	4	15,000 00	
	" 1.	Grammar Schoolhouse, Stoughton District, Building,	4	90,000 00	
	" 1.	Primary Schoolhouse, Morton Street,	4	9,000 00	
	" 1.	Primary Schoolhouse, North of Broadway,	4	8,000 00	
	" 1.	Primary Schoolhouse, Oak Square, etc.,	4	3,000 00	
Total, Financial Year, 1914-15,					396,000 00
1915.	April 1.	Cudworth Schoolhouse, Additional Land,	4	\$5,000 00	
	" 1.	Primary Schoolhouse, Eustis Street, Grading Grounds,	4	7,000 00	
	" 1.	Primary Schoolhouse, Moulton Street, Additional Land,	4	5,000 00	
	" 1.	Austin Primary Schoolhouse, Furnishing,	4	4,000 00	
	" 1.	Grammar Schoolhouse, Gibson District, Furnishing,	4	10,000 00	
	" 1.	Grammar Schoolhouse, Mt. Vernon District, Grading, etc.,	4	4,000 00	
	" 1.	Primary Schoolhouse, Canterbury and Sharon Streets, Grading, etc.,	4	5,000 00	
	" 1.	Primary Schoolhouse, Canterbury and Sharon Streets, Furnishing,	4	4,000 00	
	" 1.	Primary Schoolhouse, Eustis Street, Furnishing,	4	4,000 00	
	" 1.	Primary Schoolhouse, Morton Street, Grading, etc.,	4	4,000 00	
	" 1.	Primary Schoolhouse, Morton Street, Furnishing,	4	3,000 00	
	" 1.	Primary Schoolhouse, Moulton Street,	4	4,000 00	
	" 1.	Primary Schoolhouse, north of Broadway, Furnishing,	4	4,000 00	
	" 1.	Primary Schoolhouse, Oak Square, Furnishing,	4	1,000 00	
	" 1.	Primary Schoolhouse, Oak Square, Grading, etc.,	4	3,500 00	
	Oet. 1.	New Schoolhouse, Ward 15,	4	70,000 00	
	" 1.	Primary Schoolhouse, Aberdeen District, Building,	4	30,000 00	
	" 1.	Primary Schoolhouse, North and West Ends,	4	45,000 00	
	" 1.	Brighton High Schoolhouse, Grading, etc.,	4	16,000 00	
<i>Carried forward,</i>				\$228,500 00	\$1,686,025 00

TREASURY DEPARTMENT.

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			<i>Brought forward,</i>		\$228,500 00	\$1,686,025 00
1915.	Oct.	1.	Grammar Schoolhouse, Gibson District, Grading, etc.,	4	10,000 00	
	"	1.	Grammar Schoolhouse, Stoughton District, Grading, etc.,	4	8,000 00	
	"	1.	Primary Schoolhouse, Genesee Street, Grading, etc.,	4	27,000 00	
			Total, Financial Year, 1915-16,	4		273,500 00
1917.	Jan.	1.	School Buildings, Improvements in,	4		300,000 00
1917.	July	1.	Bailey Street School, Additional Land,	3½	\$12,000 00	
	Oct.	1.	School Buildings, Improvements in,	3½	100,000 00	
1918.	Jan.	1.	Groton Street School, etc.,	3½	2,000 00	
			Total, Financial Year, 1917-18,			114,000 00
1926.	July	1.	Schoolhouses (Acts of 1895),	4		500,000 00
1927.	July	1.	Schoolhouses (Acts of 1895),	4	\$150,000 00	
1928.	Jan.	1.	Schoolhouses (Acts of 1897),	3½	500,000 00	
			Total, Financial Year, 1927-28,			650,000 00
1928.	June	1.	Land and Buildings for Schools,	4	\$750,000 00	
	Oct.	1.	Schoolhouses (Acts of 1897),	3½	650,000 00	
			Total, Financial Year, 1928-29,			1,400,000 00
1929.	July	1.	School Committee,	3½	\$25,000 00	
	Oct.	1.	Schoolhouses (Acts of 1898),	3½	300,000 00	
1930.	Jan.	1.	School Committee,	3½	475,000 00	
			Total, Financial Year, 1929-30,			800,000 00
1930.	July	1.	Schoolhouses (Acts of 1898),	3	\$21,650 00	
	Oct.	1.	Schoolhouses (Acts of 1898),	3	278,350 00	
			Total, Financial Year, 1930-31,			300,000 00
1931.	July	1.	Schoolhouses (Acts of 1898),	3½	\$250,000 00	
	"	1.	Land and Buildings for Schools,	3½	1,000,000 00	
	Oct.	1.	Completion of School Buildings (Acts of 1901),	3	100,000 00	
1932.	Jan.	1.	Completion of School Buildings (Acts of 1901),	3	200,000 00	
			Total, Financial Year, 1931-32,			1,550,000 00
1932.	June	1.	Land and Buildings for Schools (Acts of 1901),	3½	\$1,000,000 00	
	Dec.31.		Land and Buildings for Schools,	3½	500,000 00	
			Total, Financial Year, 1932-33,			1,500,000 00
1937.	Jan.	1.	Land and Buildings for Schools,	3½		50,000 00
1937.	April	1.	Land and Buildings for Schools,	4	\$351,400 00	
	July	1.	Land and Buildings for Schools,	4	535,600 00	
			Total, Financial Year, 1937-38,			887,000 00
1944.	June	1.	Land and Buildings for Schools,	3½	\$1,500,000 00	
1945.	Jan.	1.	Land and Buildings for Schools,	3½	509,000 00	
			Total, Financial Year, 1944-45,			2,009,000 00
1945.	April	1.	Land and Buildings for Schools,	3½	\$54,000 00	
	June	1.	Land and Buildings for Schools,	3½	1,500,000 00	
			Total, Financial Year, 1945-46,			1,554,000 00
			Total Debt,			<u>\$13,573,525 00</u>

SEPARATE SYSTEMS OF DRAINAGE DEBT, No. 2.

"Separate Systems of Drainage Debt" of the City of Boston, issued under chapter 485, Acts of 1907, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Separate Systems of Drainage Sinking Fund, No. 2." The date shows when the debt becomes due.

1938.	June 1.	Separate Systems of Drainage,	4	\$255,000 00
		Total Debt,		<u>\$255,000 00</u>

SEWERAGE LOAN DEBT, No. 2.

"Sewerage Loan Debt," issued under chapter 426, Acts of 1897, chapter 257, Acts of 1898, and chapter 450, Acts of 1899, of the Legislature of Massachusetts, to be paid as it becomes due from the resources of the "Sewerage Loan Sinking Fund, No. 2." The dates show when the debt becomes due.

1938.	June 1.	Sewerage Loan,	4	\$300,000 00
		Total Debt,		<u>\$300,000 00</u>

TEN-YEAR DEBT.

"Ten-Year Debt" of the City of Boston to be paid as it becomes due from the resources of the "Ten-Year Sinking Fund." The dates show when the debt becomes due.

1909.	July 1.	Talbot Avenue, Completion of,	3½	\$50,000 00	
	"	1. Atlantic Avenue, Dewey Square to Oliver Street, Paving,	3½	38,000 00	
	"	1. Congress Street, Atlantic Avenue to Bridge, Paving,	3½	19,000 00	
	"	1. Federal Street, Dewey Square to Milk Street, Paving,	3½	18,000 00	
	"	1. Leverett Street, Minot Street to Craigie's Bridge, Paving,	3½	15,000 00	
	"	1. Kingston Street, from Bedford to Beach Street, Paving,	3½	11,000 00	
	"	1. Blackstone Street, Hanover Street, across North Street, Paving,	3½	10,000 00	
	"	1. Princeton Street, East Boston, Construction,	3½	10,000 00	
	"	1. Prescott Street, East Boston, Construction,	3½	5,000 00	
	"	1. Genesee and Oswego Streets, Asphaltting,	3½	8,000 00	
	"	1. Harrison Avenue, between Kneeland and Bennet Streets, Asphaltting,	3½	6,000 00	
	"	1. Devonshire Street, Milk to Water Streets, Asphaltting,	3½	3,800 00	
	"	1. Retaining Wall, Marecella and Centre Streets,	3½	2,500 00	
	"	1. Milton Street, Ward 8, Asphaltting,	3½	1,200 00	
		Total, Financial Year, 1909-10,			\$197,500 00
1913.	Jan. 1.	Harvard Bridge, New Pavement,	3½	13,000 00	
		Total Debt,			<u>\$210,500 00</u>

TWENTY-YEAR DEBT.

"Twenty-Year Debt" of the City of Boston, to be paid as it becomes due from the resources of the "Twenty-Year Sinking Fund." The dates show when the debt becomes due.

1911.	Oct. 1.	Sewers,	4	\$421,000 00	
	"	1. City Hospital,	4	136,500 00	
	"	1. Commonwealth Avenue, Construction,	4	210,000 00	
	"	1. L Street Bridge,	4	160,000 00	
	"	1. Paving, Dorchester Avenue, Wards 15 and 24,	4	125,000 00	
1912.	Jan. 1.	Improved Sewerage,	4	250,000 00	
	"	1. Allston Bridge,	4	90,000 00	
		Total, Financial Year, 1911-12,			\$1,392,500 00
1912.	April 1.	Various Municipal Purposes, 1892,	4	\$1,202,800 00	
	July 1.	New Lunatic Hospital,	4	200,000 00	
	Oct. 1.	Laying-Out, Street Department,	4	25,000 00	
	"	1. Buildings, Gallop's Island and Swett Street,	4	50,000 00	
	"	1. City Hospital,	4	42,000 00	
		Total, Financial Year, 1912-13,			1,519,800 00
1913.	April 1.	Various Municipal Purposes, 1893,	4	\$2,096,000 00	
	"	1. Widening Essex and Lincoln Streets,	4	260,500 00	
		Carried forward,		\$2,356,500 00	<u>\$2,912,300 00</u>

TREASURY DEPARTMENT.

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			<i>Brought forward,</i>		\$2,356,500 00	\$2,912,300 00
1913.	Oct.	1.	Stony Brook Damages,	4	30,000 00	
1914.	Jan.	1.	Commonwealth Avenue Extension,	4	50,000 00	
Total, Financial Year, 1913-14,						2,436,500 00
1914.	July	1.	Improved Sewerage,	4	\$50,000 00	
	"	1.	Commonwealth Avenue Extension,	4	100,000 00	
	Oct.	1.	Commonwealth Avenue Extension,	4	100,000 00	
	"	1.	Various Municipal Purposes, 1894,	4	453,800 00	
	"	1.	Crushed Stone for Street Improvements,	4	50,000 00	
Total, Financial Year, 1914-15,						753,800 00
1915.	April	1.	Improved Sewerage,	4	\$67,650 00	
	"	1.	New Lunatic Hospital, Furnishing,	4	10,000 00	
	"	1.	Parental School for Boys, Furnishing,	4	5,000 00	
	"	1.	Various Municipal Purposes, 1894,	4	213,000 00	
	"	1.	Various Municipal Purposes, April 22, 1895,	4	86,500 00	
	Oct.	1.	New Buildings, City Hospital,	4	300,000 00	
	"	1.	Various Municipal Purposes, July 12, 1894,	4	87,000 00	
	"	1.	Various Municipal Purposes, January 4, 1895,	4	10,000 00	
	"	1.	Various Municipal Purposes, April 22, 1895,	4	60,000 00	
	"	1.	Various Municipal Purposes, July 9, 1895,	4	38,500 00	
	"	1.	House of Industry, Additions and Alterations,	4	50,000 00	
	"	1.	Parental School for Boys, New Buildings and Alterations,	4	50,000 00	
1916.	Jan.	1.	Various Municipal Purposes, July 9, 1895,	4	1,008,700 00	
	"	4.	Library Building, Copley Square, Furnishing,	4	44,000 00	
Total, Financial Year, 1915-16,						2,030,350 00
1916.	July	1.	Various Municipal Purposes, July 9, 1895,	4	\$333,500 00	
	"	1.	Sewer Outlets, South Boston,	4	35,000 00	
	"	1.	Sidewalk Assessments, Repayment of,	4	100,000 00	
	"	1.	Wire Department,	4	50,000 00	
	"	1.	Public Bath House,	4	1,000 00	
	Oct.	1.	Public Bath House,	4	64,000 00	
	"	1.	Various Municipal Purposes, July 3, 1896,	4	103,500 00	
	"	15.	Street Department, Sewer Division,	4	41,000 00	
	Nov.	30.	Various Municipal Purposes, November 4, 1896,	4	216,500 00	
1917.	Jan.	1.	Commonwealth Avenue,	3½	50,000 00	
	"	1.	Various Municipal Purposes, November 4, 1896,	4	36,500 00	
Total, Financial Year, 1916-17,						1,031,000 00
1917.	April	1.	Various Municipal Purposes, November 4, 1896,	4	\$1,000 00	
	July	1.	Various Municipal Purposes, November 4, 1896,	4	136,000 00	
	"	1.	Wire Department,	4	50,000 00	
	"	1.	Fire Boat,	3½	16,000 00	
	"	1.	Massachusetts Historical Society Building,	3½	25,000 00	
	"	1.	Parental School, New Buildings, etc.,	3½	7,000 00	
	"	1.	House of Industry, Additions and Alterations,	3½	20,000 00	
	"	1.	Various Municipal Purposes, June 18, 1897,	3½	63,000 00	
	Oct.	1.	Various Municipal Purposes, June 18, 1897,	4	137,000 00	
1918.	Jan.	1.	Nurses' Home, Site, etc.,	3½	101,000 00	
	"	1.	Various Municipal Purposes, October 29, 1897,	3½	25,000 00	
Total, Financial Year, 1917-18,						581,000 00
1918.	April	1.	Wire Department,	3½	\$50,000 00	
	"	1.	Various Municipal Purposes, February 21, 1898,	3½	224,000 00	
	July	1.	Faneuil Hall Building, Reconstruction,	3½	80,000 00	
	"	1.	New Buildings, City Hospital,	3½	23,000 00	
	"	1.	Street Improvements, July 30, 1898,	3½	181,480 00	
	Oct.	1.	Bridge, Lauriat Avenue,	3½	21,000 00	
	"	1.	Evergreen Cemetery, Wall,	3½	1,500 00	
	"	1.	Various Municipal Purposes, September 30, 1898,	3½	16,500 00	
	"	1.	Washington Street, between Grove Hall and Columbia Road,	3½	4,500 00	
Total, Financial Year, 1918-19,						601,980 00
<i>Carried forward,</i>						\$10,346,930 00

				<i>Brought forward,</i>		\$10,346,930 00
1919.	April 1.	Various Municipal Purposes, February 27, 1899,	3½		\$175,600 00	
	" 1.	Faneuil Hall Building, Reconstruction,	3½		15,000 00	
	July 1.	Various Municipal Purposes, February 27, 1899,	3½		200,000 00	
	" 1.	Chelsea Bridge, Widening Draw, etc.,	3½		30,000 00	
	" 1.	Malden Bridge,	3½		100,000 00	
	" 1.	New Buildings, City Hospital,	3½		14,500 00	
	Oct. 1.	Almshouse, Long Island, New Power House and Equipment,	3½		10,000 00	
	" 1.	Various Municipal Purposes, June 27, 1899,	3		8,000 00	
	Dec. 1.	Faneuil Hall Building, Reconstruction,	3½		1,500 00	
	" 1.	Various Municipal Purposes, October 30, 1899,	3½		14,939 02	
				Total, Financial Year, 1919-20,		569,539 02
1921.	Jan. 1.	Engine House, Warren Avenue, Completion of,	3		\$27,000 00	
	" 1.	Various Municipal Purposes, January 5, 1901,	3		352,000 00	
				Total, Financial Year, 1920-21,		379,000 00
1921.	April 1.	Wardroom and Gymnasium, Ward 8,	3		\$10,000 00	
	" 1.	L Street Bath, New Building,	3		10,000 00	
	" 1.	Municipal Building, Upham's Corner,	3		22,000 00	
	" 1.	Hospital, Relief Station,	3		40,000 00	
	" 1.	Various Municipal Purposes, January 5, 1901,	3		91,000 00	
	" 1.	Surgical Out-Patient Department Building,	3½		50,000 00	
	" 1.	New Ward, Isolated Patients,	3½		50,000 00	
	" 1.	Courthouse, Roxbury District, etc.,	3½		50,000 00	
	" 1.	Women's Prison, Jail,	3½		100,000 00	
	" 1.	Malden Bridge,	3½		50,000 00	
	" 1.	Hospital Building, Improvements,	3½		48,000 00	
	" 1.	Wardroom and Gymnasium, Ward 8.	3½		19,000 00	
	July 1.	Green Street, Main to High, Widening,	3½		1,300 00	
	" 1.	Bennington Street, Sewer Damages,	3½		55,300 00	
	" 1.	Beacon Street, Building Line,	3½		45,000 00	
	" 1.	Completion of Morgue,	3½		20,000 00	
	Oct. 1.	Land and Buildings, Parental School,	3		40,000 00	
	" 1.	Land and Buildings, Insane Hospital,	3		60,000 00	
	" 1.	Municipal Building, Ward 16,	3		10,000 00	
	" 1.	Sheriff, Jail, Additional,	3		50,000 00	
	" 1.	New House of Correction,	3		15,000 00	
	" 1.	Garbage Plant, Spectacle Island,	3		40,000 00	
	" 1.	Completion of Morgue,	3		10,000 00	
	" 1.	Ground for Target Practice,	3		25,000 00	
	1922. Jan. 1.	Massachusetts Historical Society Building,	3		150,000 00	
	" 1.	Malden Bridge,	3		50,000 00	
	" 1.	Courthouse, Roxbury, Enlargement of,	3		26,000 00	
	" 1.	Courthouse, Roxbury, Completion of,	3		20,000 00	
	" 1.	Long Island Hospital, New Wing, etc.,	3		10,000 00	
	" 1.	Municipal Building, Ward 16,	3		35,000 00	
	" 1.	Mt. Hope Cemetery, Administration Building,	3		40,000 00	
				Total, Financial Year, 1921-22,		1,242,600 00
1922.	June 1.	Surgical Out-Patient Department Building,	3½		\$50,000 00	
	" 1.	New Ward for Isolated Patients,	3½		70,000 00	
	" 1.	Land and Buildings, Sanitary and Street Cleaning Divisions, Dorchester,	3½		34,000 00	
	" 1.	Rutherford Avenue, Widening,	3½		100,000 00	
	" 1.	New House of Correction,	3½		85,000 00	
	" 1.	Land and Buildings, Parental School,	3½		75,000 00	
	" 1.	House of Correction (chapter 347, Acts of 1899),	3½		150,000 00	
	" 1.	Sheriff, Jail, Additional,	3½		100,000 00	
	" 1.	Garbage Plant, Spectacle Island,	3½		100,000 00	
	Oct. 1.	Municipal Building, Upham's Corner,	3½		65,000 00	
	" 1.	Land and Buildings, Parental School,	3½		35,000 00	
	" 1.	Armory Building, Ward 3,	3½		29,000 00	
	" 1.	Insane Hospital, Land and Buildings,	3½		13,700 00	
	1923. Jan. 1.	Insane Hospital, Land and Buildings,	3½		50,000 00	
	" 1.	Bath House, North End,	3½		40,000 00	
	" 1.	Copley Square, Buildings on and near,	3½		48,000 00	
	" 1.	Beacon Street, Building Line,	3½		33,000 00	
				Carried forward,	\$1,077,700 00	\$12,538,069 02

<i>Brought forward,</i>			\$1,077,700 00	\$12,538,069 02
1923.	Jan.	1. Suffolk County Courthouse,	3½	10,000 00
	"	1. Mt. Hope Cemetery, Developing Land,	3½	12,000 00
	"	1. Parental School, Conduit for Electric Wires,	3½	1,500 00
	"	1. Coal Pocket, etc., Long Island,	3½	1,000 00
	"	1. Nurses' Home, Long Island,	3½	3,000 00
	"	1. Hospital Wing, Long Island,	3½	8,000 00
	"	1. Wardroom and Gymnasium, Ward 8,	3½	1,000 00
	"	1. Courthouse, Roxbury District,	3½	7,000 00
	"	1. Wardroom, Ward 15, Reconstruction,	3½	1,500 00
	"	1. Wardroom, Ward 17, Reconstruction,	3½	2,500 00
	"	1. Jail, New Brick Wall,	3½	16,000 00
	"	1. Street Improvements,	3½	500,000 00
	"	1. Cottage Street Bridge, Improvement of,	3½	6,500 00
	"	1. Bridge Department, New Trucks,	3½	2,500 00
	"	1. Bridge Department, Construction of Piers,	3½	10,000 00
	"	1. Epidemic Hospital, Boilers, etc.,	3½	4,000 00
Total, Financial Year, 1922-23,				1,664,200 00
1923.	April	1. Bath House, K Street (women),	3½	\$2,000 00
	"	1. Bath House, Dewey Beach, Charlestown,	3½	4,000 00
	"	1. Mt. Hope Cemetery, Grading, etc.,	3½	2,500 00
	"	1. Evergreen Cemetery, etc., Improvements in,	3½	10,000 00
	"	1. Parental School, Furnishing Three Cottages,	3½	10,000 00
	"	1. Parental School, Electric Plant,	3½	5,000 00
	"	1. City Hospital, Furnishing Three New Buildings,	3½	5,500 00
	"	1. Faneuil Hall Market, Sanitary Station, etc.,	3½	5,000 00
	"	1. Curtis Hall, Reconstruction,	3½	6,000 00
	"	1. New Ward for Isolated Patients, City Hospital,	3½	7,000 00
	"	1. Surgical Out-Patient Department Building, City Hospital,	3½	4,200 00
	June	1. Mt. Hope Cemetery, Developing Land,	3½	5,000 00
	"	1. Parental School, Electric Plant,	3½	10,000 00
	"	1. Faneuil Hall Market, Sanitary Station, etc.,	3½	5,000 00
	"	1. Reconstruction of Bridges over Railroad Tracks at Norfolk, Harvard, Medway and West Selden Streets,	3½	9,000 00
	"	1. Footbridge over N.Y., N.H. & H. R.R. at Sarsfield Street,	3½	5,000 00
	"	1. Footbridge over N.Y., N.H. & H. R.R. at Northampton Street,	3½	5,000 00
	"	1. Faneuil Hall Market, New Roof,	3½	4,000 00
	"	1. Land and Buildings, Insane Hospital,	3½	226,300 00
	"	1. New House of Correction,	3½	150,000 00
	"	1. Bath House, Cabot Street,	3½	100,000 00
	"	1. Gallop's Island, New Wharf, etc.,	3½	10,000 00
	"	1. City Hospital, Furnishing Three New Buildings,	3½	30,000 00
		1. Mortuary and Receiving Room, Long Island,	3½	10,000 00
	"	1. Tie-up for Cattle, Long Island,	3½	4,500 00
	"	1. Icehouse, Long Island,	3½	2,000 00
	"	1. Extension of Electric Plant, Long Island,	3½	3,000 00
	"	1. Coal Pocket and Strengthening Wharf, Long Island,	3½	10,000 00
	"	1. Wharf, Deer Island, Reconstruction,	3½	7,000 00
	"	1. New Building, in place of Old Town Hall, Dorchester,	3½	35,000 00
	"	1. Lancers' Armory,	3½	10,000 00
	"	1. Municipal Building, Upham's Corner,	3½	30,000 00
	"	1. Thomas Park, Grading, etc.,	3½	5,000 00
	"	1. Yard for Street Cleaning Division, West End,	3½	5,000 00
	"	1. Bath House, North End,	3½	50,000 00
	"	1. Office for Street Cleaning Division, Charlestown,	3½	3,000 00
	"	1. Freeport Street, Retaining Wall,	3½	5,000 00
	"	1. Mt. Hope Cemetery, Additional Land and Improvements,	3½	30,000 00
	"	1. Tower and Bell on Building corner of Bunker Hill and Lexington Streets,	3½	1,000 00
	Oct.	1. Footbridge over N.Y., N.H. & H. R.R., at Gainsborough Street,	3½	5,000 00
1924.	Jan.	1. Street Improvements,	3½	150,000 00
	"	1. Stony Brook Damages,	3½	186,000 00
	"	1. Atlantic Avenue, Reconstruction,	3½	14,000 00
<i>Carried forward,</i>			\$1,186,000 00	\$14,202,269 02

<i>Brought forward,</i>				\$1,186,000 00	\$14,202,269 02
1924.	Jan.	1.	Van Winkle Street, Ward 24, Tunnel under Railroad,	3½	5,800 00
	"	1.	Reconstruction of Bridge over Railroad Tracks at Norfolk, Harvard, Medway and West Selden Streets,	3½	31,000 00
Total, Financial Year, 1923-24,					1,222,800 00
1924.	June	1.	Atlantic Avenue, Reconstruction,	3½	\$66,000 00
	"	1.	Institutions Department, New Boat,	3½	75,000 00
	"	1.	Street Improvements,	3½	300,000 00
	"	1.	Shawmut Avenue Bridge,	3½	28,000 00
	"	1.	Furnishing New Buildings, Austin Farm,	3½	25,000 00
Oct.	1.	1.	Insane Hospital, Additional Land,	3½	24,000 00
Total, Financial Year, 1924-25,					518,000 00
1925.	Dec.	1.	Abolition of Grade Crossings, Dorchester Avenue,	3½	\$757,000 00
	"	1.	Bennington Street Sewer Damages,	3½	18,500 00
	"	1.	Copley Square, Buildings on or near,	3½	1,500 00
	"	1.	Eustis Street Burying Ground, Fence,	3½	1,000 00
	"	1.	Bath House, Cabot Street,	3½	5,000 00
	"	1.	Chelsea Bridge, South Draw,	3½	500 00
	"	1.	Cottage Street Bridge, Reconstruction of,	3½	7,000 00
	"	1.	Dover Street Bridge, Widening Draw,	3½	9,000 00
	"	1.	Coal Pocket, Ferry Division,	3½	25,000 00
	"	1.	Equipping Ferry Boats,	3½	12,000 00
	"	1.	Street Improvements,	3½	220,000 00
	"	1.	Freeport Street, Retaining Wall,	3½	7,500 00
1926.	Jan.	1.	Chelsea Bridge, South Draw,	3½	14,500 00
Total, Financial Year, 1925-26,					1,078,500 00
1926.	June	1.	Franklin Union Site,	3½	\$100,000 00
	"	1.	Emergency Hospital, East Boston,	3½	6,000 00
July	1.	1.	Hospital for Consumptives,	4	150,000 00
Oct.	1.	1.	Emergency Hospital, East Boston,	3½	24,000 00
Dec.	1.	1.	Temple Street, Ward 23, Tunnel, etc.,	3½	4,350 00
1927.	Jan.	1.	Temple Street, Ward 23, Tunnel, etc.,	3½	27,650 00
	"	1.	Copley Square, Buildings on or near,	3½	347,000 00
	"	1.	Bowdoin Street Grade Damages,	3½	61,000 00
	"	1.	Dorchester Street,	3½	6,100 00
	"	1.	Abolition of Grade Crossings, Dorchester Avenue,	3½	80,000 00
Total, Financial Year, 1926-27,					806,100 00
1927.	April	1.	Emergency Hospital, East Boston,	4	\$28,000 00
	"	1.	Bath House, McKenzie Beach,	4	5,000 00
July	1.	1.	Brandon Street and Belgrade Avenue,	4	7,200 00
	"	1.	Old Provincial State House,	4	7,500 00
	"	1.	Meridian Street Bridge,	4	10,000 00
	"	1.	Bath House, Tenean Beach,	4	5,000 00
	"	1.	Bath House, Dewey Beach,	4	2,000 00
	"	1.	Engine 7 House, Addition,	4	2,000 00
	"	1.	Ward Building for Measles,	4	75,000 00
	"	1.	Ladder 1 House, Rebuilding,	4	8,000 00
	"	1.	Engine 6 House, Addition,	4	6,000 00
	"	1.	New Fire Boat,	4	75,000 00
	"	1.	Engine 29 and Ladder 11 House, Alterations,	4	4,000 00
	"	1.	Mt. Washington Avenue Bridge,	4	60,000 00
	"	1.	Consumptives' Hospital,	4	140,000 00
	"	1.	Landing for Fire Boat and Quarters for Men,	4	10,000 00
	"	1.	House and Apparatus, Parker Hill,	4	15,000 00
	"	1.	House, Land and Apparatus, Forest Hills,	4	30,000 00
	"	1.	House, Land and Apparatus, Orient Heights,	4	15,000 00
Total, Financial Year, 1927-28,					504,700 00
1928.	April	1.	Consumptives' Hospital, Buildings and Equipment,	4	\$17,000 00
	June	1.	Wharf, Long Island,	4	16,500 00
	"	1.	Bath House, North End, Additional,	4	20,000 00
	"	1.	School Building, Parental School, West Roxbury,	4	50,000 00
	"	1.	Hospital for Consumptives, Additional,	4	25,000 00
	"	1.	Chelsea Bridge,	4	75,000 00
<i>Carried forward,</i>				\$203,500 00	\$18,332,369 02

<i>Brought forward,</i>				\$203,500 00	\$18,332,369 02
1928.	June 1.	Huntington Avenue Bridge,	4	55,000 00	
	" 1.	Massachusetts Avenue Bridge,	4	40,000 00	
	" 1.	Congress Street Bridge,	4	35,000 00	
	" 1.	New Fire Boat, Additional,	4	20,000 00	
	" 1.	Emergency Hospital, East Boston, Equip- ment,	4	13,000 00	
	" 1.	Washington Street, West Roxbury (chap- ter 574, Acts 1907),	4	25,000 00	
	" 1.	City Building, Adams and Arcadia Streets, Addition,	4	6,500 00	
Total, Financial Year, 1928-29,					398,000 00
Total Debt,					<u>\$18,730,369 02</u>

THIRTY-YEAR DEBT, No. 1.

"Thirty-Year Debt" of the City of Boston, to be paid as it becomes due from the resources of the "Thirty-Year Sinking Fund." The dates show when the debt becomes due.

1928.	Oct. 1.	Chapel, Mt. Hope Cemetery,	3½		\$25,000 00
1931.	Oct. 1.	Carleton Street,	3	\$18,000 00	
1932.	Jan. 1.	Carleton Street,	3	42,000 00	
Total, Financial Year, 1931-32,					60,000 00
1932.	June 1.	Broadway Bridge, Rebuilding,	3½	\$200,000 00	
	" 1.	Ferry Improvements,	3½	100,000 00	
Total, Financial Year, 1932-33,					300,000 00
1934.	Jan. 1.	Broadway Bridge, Rebuilding,	3½		60,000 00
1935.	Jan. 1.	Broadway Bridge, Rebuilding,	3½		1,500 00
1936.	Jan. 1.	Broadway Bridge, Rebuilding,	3½		1,500 00
Total Debt,					<u>\$448,000 00</u>

DEBT OF THE CITY OF BOSTON,

Issued OUTSIDE THE DEBT LIMIT fixed by Section 3 of Chapter 27
of the Revised Laws.

ATLANTIC AVENUE EXTENSION DEBT.

“Atlantic Avenue Extension Debt” of the City of Boston, issued under chapter 466, Acts of 1899, of the Legislature of Massachusetts, to be paid as it becomes due from the resources of the “Atlantic Avenue Extension Sinking Fund.” The dates show when the debt becomes due.

1932.	June	1.	Atlantic Avenue Extension,	3½	\$150,000 00
1934.	June	1.	Atlantic Avenue Extension,	3½	100,000 00
1936.	Jan.	1.	Atlantic Avenue Extension,	3½	25,000 00
1937.	Dec.	1.	Atlantic Avenue Extension,	4	14,000 00
1938.	Oct.	1.	Atlantic Avenue Extension,	4	8,900 00
Total Debt,					<u>\$297,900 00</u>

BLUE HILL AND OTHER AVENUES DEBT.

“Blue Hill and Other Avenues Debt” of the City of Boston, issued under chapter 334, Acts of 1895, and chapter 236, Acts of 1898, of the Legislature of Massachusetts, to be paid as it becomes due from the resources of the “Blue Hill and Other Avenues Sinking Fund.” The dates show when the debt becomes due.

1935.	July	1.	Blue Hill and Other Avenues, (Chapter 334, Acts 1895.)	4	\$1,000,000 00
1936.	July	1.	Blue Hill and Other Avenues, (Chapter 334, Acts 1895.)	4	\$1,000,000 00
1937.	Jan.	1.	Blue Hill and Other Avenues. (Chapter 334, Acts 1895.)	3½	<u>60,000 00</u>
					1,060,000 00
1938.	July	1.	Blue Hill and Other Avenues, (Chapter 236, Acts 1898.)	3½	<u>200,000 00</u>
					<u>\$2,260,000 00</u>

CAMBRIDGE BRIDGE DEBT.

“Cambridge Bridge Debt” of the City of Boston, issued under chapter 467, Acts of 1898, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the “Cambridge Bridge Sinking Fund.” The dates show when the debt becomes due.

1938.	Oct.	1.	Cambridge Bridge,	3½	\$50,000 00
1939.	July	1.	Cambridge Bridge,	3½	\$100,000 00
1940.	Jan.	1.	Cambridge Bridge,	3½	<u>200,000 00</u>
					300,000 00
1942.	June	1.	Cambridge Bridge,	3½	200,000 00
1943.	June	1.	Cambridge Bridge,	3½	200,000 00
1944.	June	1.	Cambridge Bridge,	3½	\$250,000 00
1945.	Jan.	1.	Cambridge Bridge,	3½	<u>50,000 00</u>
					300,000 00
1945.	July	1.	Cambridge Bridge,	3½	100,000 00
1946.	July	1.	Cambridge Bridge,	4	150,000 00
1947.	Dec.	1.	Cambridge Bridge,	4	49,000 00
1949.	Jan.	1.	Cambridge Bridge,	3½	<u>1,800 00</u>
Total Debt,					<u>\$1,350,800 00</u>

CHARLES RIVER BASIN DEBT.

"Charles River Basin Debt" of the City of Boston, issued under chapter 465, Acts of 1903, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of "Charles River Basin Sinking Fund." The dates show when the debt becomes due.

1934.	Jan.	1.	Charles River Basin,	3½	\$300,000 00
1944.	June	1.	Charles River Basin,	3½	500,000 00
Total Debt,					<u>\$800,000 00</u>

HIGHWAYS, MAKING OF, DEBT, No. 2.

"Highways, Making of, Debt" of the City of Boston, issued under chapter 323 of the Acts of 1891, chapters 401, 402 and 418 of the Acts of 1892, chapters 319 and 346 of the Acts of 1897, and chapter 443 of the Acts of 1899, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Highways, Making of, Sinking Fund, No. 2." The dates show when the debt becomes due.

1913.	July	1.	Laying Out and Construction of Highways, 4	\$350,000 00	
	Oct.	1.	Laying Out and Construction of Highways, 4	150,000 00	
Total, Financial Year, 1913-14,					\$500,000 00
1915.	July	1.	Laying Out and Construction of Highways, 4	\$500,000 00	
Total, Financial Year, 1915-16,					500,000 00
1916.	July	1.	Laying Out and Construction of Highways, 4	\$700,000 00	
1917.	Jan.	1.	Laying Out and Construction of Highways, 3½	500,000 00	
Total, Financial Year, 1916-17,					1,200,000 00
1919.	July	1.	Laying Out and Construction of Highways:		
			Brighton, 3½	\$100,000 00	
			East Boston, 3½	300,000 00	
	"	1.	Dorchester, 3½	250,000 00	
			Roxbury and West Roxbury, 3½	175,000 00	
Total, Financial Year, 1919-20,					825,000 00
1928.	Jan.	1.	Laying Out and Construction of Highways, 3½	\$750,000 00	
Total, Financial Year, 1927-28,					750,000 00
1928.	July	1.	Laying Out and Construction of Highways,		
			Charlestown Street, 3½	\$5,000 00	
	Oct.	1.	Laying Out and Construction of Highways, 3½	6,000 00	
1929.	Jan.	1.	Laying Out and Construction of Highways, 3½	650 00	
Total, Financial Year, 1928-29,					11,650 00
1929.	April	1.	Laying Out and Construction of Highways, 3½	\$44,800 00	
1930.	Jan.	1.	Laying Out and Construction of Highways, 3½	518,000 00	
Total, Financial Year, 1929-30,					562,800 00
1930.	July	1.	Laying Out and Construction of Highways, 3	\$3,550 00	
	"	1.	Laying Out and Construction of Highways, 3½	461,000 00	
	"	1.	Laying Out and Construction of Highways,		
			East Boston, 3½	200,000 00	
1931.	Jan.	1.	Laying Out and Construction of Highways,		
			Charlestown Street, 3	150,000 00	
Total, Financial Year, 1930-31,					814,550 00
1931.	Oct.	1.	Laying Out and Construction of Highways,		
			Dorchester, 3	\$20,000 00	
Total, Financial Year, 1931-32,					20,000 00
1932.	June	1.	Laying Out and Construction of Highways:		
			Brighton, 3½	\$100,000 00	
			Dorchester, 3½	130,000 00	
Carried forward,				\$230,000 00	\$5,184,000 00

		<i>Brought forward,</i>		\$230,000 00	\$5,184,000 00
1932.	June 1.	East Boston,	3½	100,000 00	
		Roxbury and West Roxbury,	3½	125,000 00	
	Oct. 1.	Laying Out and Construction of Highways,			
		Charlestown Street,	3½	30,000 00	
	Dec. 31.	Highways, Making of,	3½	500,000 00	
1933.	Jan. 1.	Laying Out and Construction of Highways,			
		Charlestown Street,	3½	5,000 00	
Total, Financial Year, 1932-33,					990,000 00
1933.	June 1.	Highways, Making of,	3½	\$500,000 00	
1934.	Jan. 1.	Highways, Making of,	3½	170,000 00	
Total, Financial Year, 1933-34,					670,000 00
1935.	Dec. 1.	Highways, Making of,	3½		283,000 00
Total Debt,					<u>\$7,127,000 00</u>

IMPROVED SEWERAGE SPECIAL DEBT.

"Improved Sewerage Debt" of the City of Boston, issued under chapter 322 of the Acts of 1889, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Improved Sewerage Special Sinking Fund." The date shows when the debt becomes due.

1919.	July 1.	Improved Sewerage,	3½	\$500,000 00	
Total Debt,					<u>\$500,000 00</u>

NEW FERRY LANDING DEBT.

"New Ferry Landing Debt" of the City of Boston, issued under chapter 435 of the Acts of 1895, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "New Ferry Landing Sinking Fund." The dates show when the debt becomes due.

1916.	Oct. 1.	New Ferry Landing,	4	\$25,000 00	
1917.	Jan. 1.	New Ferry Landing,	4	5,000 00	
Total, Financial Year, 1916-17,					\$30,000 00
1917.	July 1.	New Ferry Landing,	4	\$5,000 00	
	Oct. 1.	New Ferry Landing,	4	5,000 00	
1918.	Jan. 1.	New Ferry Landing,	3½	103,800 00	
Total, Financial Year, 1917-18,					113,800 00
1918.	April 1.	New Ferry Landing,	3½		25,000 00
1919.	July 1.	New Ferry Landing,	3½		331,200 00
Total Debt,					<u>\$500,000 00</u>

NEW PUBLIC LIBRARY SPECIAL DEBT.

"New Public Library Special Debt" of the City of Boston, issued under chapter 68 of the Acts of 1889, chapter 324 of the Acts of 1891, and chapter 475, Acts of 1898, of the Legislature of Massachusetts, and to be paid as it becomes due from the "New Public Library Special Debt Sinking Fund."

1923.	Jan. 1.	Library Building, Copley Square (chapter 324, 1891),	4		\$200,000 00
1923.	Oct. 1.	Library Building, Copley Square (chapter 324, 1891),	4		325,000 00
1925.	Jan. 1.	Library Building, Copley Square (chapter 324, 1891),	4		49,500 00
1925.	Oct. 1.	Library Building, Copley Square (chapter 324, 1891),	4		35,500 00
Total Debt,					<u>\$610,000 00</u>

PUBLIC PARK SPECIAL DEBT.

"Public Park Special Debt" of the City of Boston, issued under chapter 304, Acts of 1886, chapter 312, Acts of 1887, chapter 392, Acts of 1888, chapters 271 and 444, Acts of 1890, chapters 301 and 323, Acts of 1891, chapter 396, Acts of 1894, chapter 453, Acts of 1896, chapters 319 and 394, Acts of 1897, chapter 313, Acts of 1898, and chapter 303, Acts of 1899, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Public Park Special Sinking Fund." The dates show when the debt becomes due.

1917.	July	1.	Public Park Lands (chapter 312, 1887),	3½	\$400,000 00	
1918.	Jan.	1.	Public Park Construction (chapter 304, 1886),	4	450,000 00	
Total, Financial Year, 1917-18,						\$850,000 00
1918.	April	1.	Public Park Construction (chapter 304, 1886),	4	\$5,000 00	
	July	1.	Public Park Construction (chapter 304, 1886),	4	5,000 00	
	Oct.	1.	Public Park Construction (chapter 304, 1886),	4	40,000 00	
1919.	Jan.	1.	Public Park Construction (chapter 304, 1886),	4	480,500 00	
Total, Financial Year, 1918-19,						530,500 00
1919.	April	1.	Public Park Construction (chapter 304, 1886),	4	\$16,000 00	
	July	1.	Public Park Construction (chapter 304, 1886),	4	3,500 00	
1920.	Jan.	1.	Public Park Construction (chapter 304, 1886),	4	439,500 00	
	"	1.	Public Park Lands (chapter 392, 1888),	3½	600,000 00	
Total, Financial Year, 1919-20,						1,059,000 00
1920.	July	1.	Public Park Construction (chapter 304, 1886),	4	\$16,400 00	
	Oct.	1.	Public Park Construction (chapter 304, 1886),	4	44,100 00	
1921.	Jan.	1.	Public Park Construction (chapter 304, 1886),	4	500,000 00	
Total, Financial Year, 1920-21,						560,500 00
1921.	June	1.	Public Parks (chapter 301, 1891),	4		700,000 00
1922.	April	1.	Public Parks (chapter 301, 1891),	4	\$200,000 00	
	Oct.	1.	Public Parks " "	4	301,000 00	
1923.	Jan.	1.	Public Parks " "	4	250,000 00	
Total, Financial Year, 1922-23,						751,000 00
1923.	July	1.	Public Parks (chapter 301, 1891),	4	\$500,000 00	
	Oct.	1.	Public Parks " "	4	450,000 00	
1924.	Jan.	1.	Public Parks " "	4	99,000 00	
Total, Financial Year, 1923-24,						1,049,000 00
1924.	Oct.	1.	Public Parks (chapter 301, 1891),	4	\$1,000,000 00	
1925.	Jan.	2.	Public Parks (chapter 396, 1894),	4	1,000,000 00	
Total, Financial Year, 1924-25,						2,000,000 00
1927.	Jan.	1.	Public Parks (chapter 453, 1896),	3½		500,000 00
1927.	Oct.	1.	Public Parks (chapter 453, 1896),	4	\$50,000 00	
1928.	Jan.	1.	Public Parks " "	3½	450,000 00	
Total, Financial Year, 1927-28,						500,000 00
1928.	April	1.	Public Parks (chapter 313, 1898),	3½	\$50,000 00	
	Oct.	1.	Public Parks " "	3½	450,000 00	
Total, Financial Year, 1929-30,						500,000 00
Carried forward,						\$9,000,000 00

<i>Brought forward,</i>					\$9,000,000 00
1929.	July 1.	Public Parks (chapter 303, 1899),	3½	\$500,000 00	
1930.	Jan. 1.	Public Parks (chapters 319 and 394, 1897),	3½	486,000 00	
Total, Financial Year, 1929-30,					986,000 00
1930.	July 1.	Public Parks (chapter 319 and 394, 1897),	3½		130,000 00
1934.	Jan. 1.	Public Parks (chapter 321, 1892),	3½		170,000 00
1935.	July 1.	Public Parks (chapter 323, 1891),	3½	\$19,000 00	
	Oct. 1.	Public Parks	3½	9,500 00	
	Dec. 1.	Public Parks	3½	5,000 00	
1936.	Jan. 1.	Public Parks	3½	33,000 00	
Total, Financial Year, 1935-36,					66,500 00
1937.	Jan. 1.	Public Park Construction (chapter 304, 1886),	3½		500,000 00
Total Debt,					<u>\$10,852,500 00</u>

RAPID TRANSIT LOAN DEBT.

"Rapid Transit Loan Debt," issued under chapter 548, Acts of 1894, and chapter 500, Acts of 1897, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Rapid Transit Loan Sinking Fund." The dates show when the debt becomes due.

1934.	Oct. 1.	Rapid Transit,	4		\$50,000 00
1935.	April 1.	Rapid Transit,	4	\$1,000,000 00	
1936.	Jan. 1.	Rapid Transit,	3½	250,000 00	
					1,250,000 00
1936.	April 1.	Rapid Transit,	3½	\$500,000 00	
	Oct. 1.	Rapid Transit,	3½	1,500,000 00	
					2,000,000 00
1937.	July 1.	Rapid Transit,	3½		865,000 00
1938.	April 1.	Rapid Transit Alterations,	3½		200,000 00
1940.	July 1.	Rapid Transit Alterations,	3½		50,000 00
1942.	Jan. 1.	Rapid Transit,	3		1,000 00
Total Debt,					<u>\$4,416,000 00</u>

BOSTON TUNNEL AND SUBWAY DEBT.

"Boston Tunnel and Subway Debt" of the City of Boston, issued under chapter 534, Acts of 1902, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Boston Tunnel and Subway Sinking Fund." The dates show when the debt becomes due.

1944.	Jan. 1.	Boston Tunnel and Subway,	3½		\$50,000 00
1944.	June 1.	Boston Tunnel and Subway,	3½		950,000 00
1945.	April 1.	Boston Tunnel and Subway, -	3½	\$556,700 00	
	July 1.	Boston Tunnel and Subway,	3½	1,400,000 00	
Total, Financial Year, 1945-46,					1,956,700 00
1946.	April 1.	Boston Tunnel and Subway,	3½	\$11,000 00	
	June 1.	Boston Tunnel and Subway,	3½	489,000 00	
	July 1.	Boston Tunnel and Subway,	4	1,000,000 00	
1947.	Jan. 1.	Boston Tunnel and Subway,	3½	13,150 00	
Total, Financial Year, 1946-47,					1,513,150 00
1947.	April 1.	Boston Tunnel and Subway,	4	\$486,850 00	
	July 1.	Boston Tunnel and Subway,	4	1,000,000 00	
Total, Financial Year, 1947-48,					1,486,850 00
1948.	June 1.	Boston Tunnel and Subway,	4		2,000,000 00
Total Debt,					<u>\$7,956,700 00</u>

RAPID TRANSIT LOAN, EAST BOSTON TUNNEL DEBT.

"Rapid Transit Loan, East Boston Tunnel Debt," issued under chapter 548, Acts of 1894, chapter 500, Acts of 1897, chapter 190, Acts of 1903, and chapter 187, Acts of 1905, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Rapid Transit Loan, East Boston Tunnel Sinking Fund." The dates show when the debt becomes due.

1937.	July	1.	Rapid Transit,	3½	\$135,000 00	
1938.	Jan.	1.	Rapid Transit,	3½	200,000 00	
Total, Financial Year, 1937-38,						\$335,000 00
1941.	Oct.	1.	Rapid Transit, East Boston Tunnel,	3	\$250,000 00	
1942.	Jan.	1.	Rapid Transit, East Boston Tunnel,	3	200,000 00	
Total, Financial Year, 1941-42,						450,000 00
1942.	June	1.	Rapid Transit, East Boston Tunnel,	3½	\$500,000 00	
1943.	Jan.	1.	Rapid Transit, East Boston Tunnel,	3½	300,000 00	
Total, Financial Year, 1942-43,						800,000 00
1943.	June	1.	Rapid Transit, East Boston Tunnel,	3½	1,300,000 00	
1944.	June	1.	Rapid Transit, East Boston Tunnel,	3½	133,000 00	
1945.	July	1.	Rapid Transit, East Boston Tunnel,	3½	100,000 00	
1947.	Jan.	1.	Rapid Transit, East Boston Tunnel,	3½	75,000 00	
Total Debt,						<u>\$3,193,000 00</u>

RAPID TRANSIT LOAN, RIVERBANK SUBWAY DEBT
AND SINKING FUND.

"Rapid Transit Loan, Riverbank Subway Debt," issued under chapter 573, Acts of 1907, of the Legislature of Massachusetts, and "not included within the debt limit fixed by section 2 of chapter 178, of the Acts of 1885," to be paid as it becomes due from the resources of the "Rapid Transit Loan, Riverbank Subway Sinking Fund." The date shows when the debt becomes due.

1947.	Oct.	1.	Riverbank Subway,	4	\$5,000 00	
Total Debt,						<u>\$5,000 00</u>

RAPID TRANSIT LOAN, CHARLESTOWN BRIDGE DEBT, No. 2.

"Rapid Transit Loan, Charlestown Bridge Debt," issued under chapter 548, Acts of 1894, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Rapid Transit Loan, Charlestown Bridge Sinking Fund, No. 2." The dates show when the debt becomes due.

1938.	Jan.	1.	Charlestown Bridge,	3½	\$200,000 00	
1939.	July	1.	Charlestown Bridge,	3½	\$200,000 00	
1940.	Jan.	1.	Charlestown Bridge,	3½	200,000 00	
Total, Financial Year, 1939-40,						400,000 00
1940.	July	1.	Charlestown Bridge,	3½	200,000 00	
1942.	Jan.	1.	Charlestown Bridge,	3½	5,000 00	
Total Debt,						<u>\$805,000 00</u>

SCHOOLHOUSES DEBT, No. 1.

"Schoolhouses Debt" of the City of Boston, issued under chapter 408, Acts of 1895, chapter 239, Acts of 1899, and chapter 450, Acts of 1907, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Schoolhouses Sinking Fund, No. 1."

1928.	June 1.	Land and Buildings for Schools,	4	\$250,000 00
1931.	Jan. 1.	Normal School Building and Land (Acts of 1899),	3	5,000 00
1935.	July 1.	Schoolhouses (Acts of 1895),	4	500,000 00
Total Debt,				<u>\$755,000 00</u>

SEPARATE SYSTEMS OF DRAINAGE DEBT, No. 1.

"Separate Systems of Drainage Debt" of the City of Boston, issued under chapter 383, Acts of 1903 and chapter 485, Acts of 1907, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Separate Systems of Drainage Sinking Fund, No. 1." The dates show when the debt becomes due.

1934.	Jan. 1.	Separate Systems of Drainage,	3½	\$400,000 00
1934.	June 1.	Separate Systems of Drainage,	3½	\$200,000 00
1935.	Jan. 1.	Separate Systems of Drainage,	3½	600,000 00
Total, Financial Year, 1934-35,				<u>800,000 00</u>
1935.	Dec. 1.	Separate Systems of Drainage,	3½	600,000 00
1936.	July 1.	Separate Systems of Drainage,	4	600,000 00
1937.	July 1.	Separate Systems of Drainage,	4	500,000 00
1938.	June 1.	Separate Systems of Drainage,	4	400,000 00
Total Debt,				<u>\$3,300,000 00</u>

SEWERAGE LOAN DEBT, No. 1.

"Sewerage Loan Debt," issued under chapter 426 of the Acts of 1897, chapter 257, Acts of 1898, and chapter 450, Acts of 1899, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Sewerage Loan Sinking Fund, No. 1." The dates show when the debt becomes due.

1928.	Jan. 1.	Sewerage Loan,	3½	\$500,000 00
1928.	July 1.	Sewerage Loan,	3½	500,000 00
1929.	July 1.	Sewerage Loan,	3½	\$1,000,000 00
1930.	Jan. 1.	Sewerage Loan,	3½	100,000 00
Total, Financial Year, 1929-30,				<u>1,100,000 00</u>
1930.	April 1.	Sewerage Loan,	3½	\$109,000 00
	July 1.	Sewerage Loan,	3½	791,000 00
Total, Financial Year, 1930-31,				<u>900,000 00</u>
1932.	June 1.	Sewerage Loan,	3½	1,000,000 00
1933.	June 1.	Sewerage Loan,	3½	1,000,000 00
1935.	July 1.	Sewerage Loan,	3½	\$800,000 00
	Dec. 1.	Sewerage Loan,	3½	200,000 00
Total, Financial Year, 1935-36,				<u>1,000,000 00</u>
1936.	July 1.	Sewerage Loan,	4	749,000 00
1937.	April 1.	Sewerage Loan,	4	\$200,650 00
	July 1.	Sewerage Loan,	4	495,000 00
	Oct. 1.	Sewerage Loan,	4	4,350 00
Total, Financial Year, 1937-38,				<u>700,000 00</u>
1944.	June 1.	Sewerage Loan,	3½	1,000,000 00
Total Debt,				<u>\$8,449,000 00</u>

STONY BROOK IMPROVEMENT, SPECIAL DEBT.

“Stony Brook Improvement Debt” of the City of Boston, issued under chapter 428 of the Acts of 1887, chapter 530 of the Acts of 1896, and chapter 397 of the Acts of 1899, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the “Stony Brook Improvement Sinking Fund.” The dates show when the debt becomes due.

1917.	Oct.	1.	Stony Brook Improvement (chapter 428, 1887),	4		\$500,000 00
1937.	July	1.	Stony Brook Improvement (chapter 530, 1896),	3½	\$84,000 00	
1938.	Jan.	1.	Stony Brook Improvement (chapter 530, 1896),	3½	100,000 00	
Total, Financial Year, 1937-38,						184,000 00
1939.	July	1.	Stony Brook Improvement (chapter 397, 1899),	3½		350,000 00
Total Debt,						\$1,034,000 00

THIRTY-YEAR DEBT, No. 2.

“Thirty-Year Debt, No. 2” of the City of Boston, issued under chapter 370 and chapter 381, Acts of 1903, chapter 391, Acts of 1904, of the Legislature of Massachusetts, and “not included within the limit of debt fixed by section 2 of chapter 178 of the Acts of 1885,” to be paid as it becomes due from the resources of the “Thirty-Year Sinking Fund, No. 2.” The dates show when the debt becomes due.

1934.	Jan.	1.	Dorchester Street,	3½	\$375,000	00	
	"	1.	Hyde Park Avenue,	3½	225,000	00	
	"	1.	Brandon Street and Belgrade Avenue,	3½	100,000	00	
Total, Financial Year, 1933-34,							\$700,000 00
1935.	Jan.	1.	Northern Avenue and Sleeper Street,	3½			10,000 00
1936.	July	1.	Northern Avenue and Sleeper Street,	4	\$100,000	00	
1937.	Jan.	1.	Brookline Street Bridge,	3½	48,000	00	
Total, Financial Year, 1936-37,							148,000 00
1937.	July	1.	Northern Avenue and Sleeper Street,	4	\$300,000	00	
	Dec.	1.	Brookline Street Bridge,	4	9,000	00	
Total, Financial Year, 1937-38,							309,000 00
1938.	June	1.	Northern Avenue and Sleeper Street,	4			100,000 00
Total Debt,							\$1,267,000 00

COCHITUATE WATER DEBT.

“Cochituate Water Debt” of the City of Boston, to be paid as it becomes due from the “Cochituate Water Sinking Fund.” The dates show when the debt becomes due.

1909.	July 1.	Additional Supply of Water,	4	\$64,000 00	
	Oct. 1.	Additional Supply of Water,	4½	120,000 00	
		Total, Financial Year, 1909-10,			\$184,000 00
1910.	April 1.	Cochituate Water Works, New Main,	4		253,000 00
1912.	April 1.	Additional Supply of Water,	4		324,000 00
1913.	Oct. 1.	Additional Supply of Water,	4	\$50,000 00	
1914.	Jan. 1.	Introduction of Meters and Inspection,	4	250,000 00	
	" 1.	Additional Supply of Water,	4	209,000 00	
		Total, Financial Year, 1913-14,			509,000 00
		Carried forward,			\$1,270,000 00

		<i>Brought forward,</i>			\$1,270,000 00
1914.	April 1.	Additional Supply of Water,	4	\$9,500 00	
	Oct. 1.	Additional Supply of Water,	4	10,000 00	
		Total, Financial Year, 1914-15,			19,500 00
1915.	April 1.	High Service,	4	\$31,200 00	
	" 1.	Additional Supply of Water,	4	1,500 00	
	Oct. 1.	High Service,	4	7,000 00	
1916.	Jan. 1.	High Service,	4	18,000 00	
		Total, Financial Year, 1915-16,			57,700 00
1916.	April 1.	High Service,	4	\$18,500 00	
	Oct. 1.	High Service,	4	11,300 00	
1917.	Jan. 1.	High Service,	4	8,000 00	
		Total, Financial Year, 1916-17,			37,800 00
1917.	April 1.	High Service,	4	\$6,000 00	
	" 1.	Extension of Mains, etc.,	3½	150,000 00	
	" 1.	Additional Supply of Water,	3½	35,000 00	
	" 1.	Protection of Water Supply,	3½	50,000 00	
	" 1.	Improvement of Lake Cochituate,	3½	40,000 00	
	Oct. 1.	High Service,	4	10,700 00	
	" 1.	Extension of Mains, C. W. Works,	4	147,000 00	
1918.	Jan. 1.	High Service,	4	13,000 00	
		Total, Financial Year, 1917-18,			451,700 00
1918.	April 1.	High Service,	4	\$300 00	
	July 1.	Extension of Mains, etc.,	3½	100,000 00	
	Oct. 1.	Extension of Mains, etc.,	4	95,000 00	
		Total, Financial Year, 1918-19,			195,300 00
1919.	April 1.	Extension of Mains, etc.,	4	\$200,000 00	
	Oct. 1.	Additional Supply of Water,	3½	2,000 00	
	" 1.	Additional Supply of Water,	4	189,000 00	
	Nov. 15.	Extension of Mains, etc.,	3½	15,000 00	
	" 30.	Extension of Mains, etc.,	3½	91,000 00	
1920.	Jan. 1.	Extension of Mains, etc.,	3½	10,000 00	
	" 1.	High Service,	3½	50,000 00	
	" 1.	Extension of Mains, etc.,	3½	10,000 00	
		Total, Financial Year, 1919-20,			567,000 00
1920.	Oct. 1.	Additional Supply of Water,	4	\$103,500 00	
	" 1.	Extension of Mains, etc.,	4	69,000 00	
		Total, Financial Year, 1920-21,			172,500 00
1921.	April 1.	Extension of Mains, etc.,	4	\$100,000 00	
	Oct. 1.	Additional Supply of Water,	4	140,500 00	
1922.	Jan. 1.	Extension of Mains, etc.,	4	80,000 00	
		Total, Financial Year, 1921-22,			320,500 00
1922.	April 1.	High Service,	4	\$75,000 00	
	Oct. 1.	Additional Supply of Water,	4	193,000 00	
		Total, Financial Year, 1922-23,			268,000 00
1923.	Oct. 1.	Additional Supply of Water,	4	18,275 00	
1924.	Oct. 1.	Additional Supply of Water,	4	436,225 00	
1927.	Oct. 1.	Additional Supply of Water,	3½	25,000 00	
1929.	July 1.	Extension of Mains, etc.,	3½	410,000 00	
		Total Debt,			<u>\$4,249,500 00</u>

DEBT OF THE COUNTY OF SUFFOLK.

Issued WITHIN THE DEBT LIMIT fixed by Section 3 of Chapter 27 of the Revised Laws.

SUFFOLK COUNTY COURTHOUSE DEBT.

(Serial Payment Debt.)

"Suffolk County Courthouse Debt," issued under chapter 377 of the Acts of 1885, of the Legislature of Massachusetts, and to be paid as it becomes due from taxes of the City of Boston.

County Serial Payment 3% Debt, payable \$17,000 yearly, October 1 to October 1, 1935, inclusive. Balance due January 31, 1909,	\$459,000 00
Total County Debt, issued inside of debt limit,	<u>\$459,000 00</u>

Issued OUTSIDE THE DEBT LIMIT fixed by Section 3 of Chapter 27 of the Revised Laws.

SUFFOLK COUNTY COURTHOUSE DEBT.

"Suffolk County Courthouse Debt," issued under chapter 101 of the Acts of 1887, of the Legislature of Massachusetts, and to be paid as it becomes due from the resources of the "Suffolk County Courthouse Sinking Fund." The dates show when the debt becomes due.

1918.	Oct.	1.	Suffolk County Courthouse,	4		\$700,000 00
1919.	Oct.	1.	Suffolk County Courthouse,	3½		800,000 00
1922.	July	1.	Suffolk County Courthouse,	4	\$306,000 00	
	"	1.	Suffolk County Courthouse, Furnishing,	4	<u>100,000 00</u>	
			Total, Financial Year, 1922-23,			406,000 00
1923.	Oct.	1.	Suffolk County Courthouse, Furnishing,	4		75,000 00
1924.	July	1.	Suffolk County Courthouse,	4		40,000 00
1937.	April	1.	Suffolk County Courthouse,	3½		800,000 00
1938.	July	1.	Suffolk County Courthouse,	3½		100,000 00
			Total County Debt, issued outside of debt limit,			<u>\$2,921 000 00</u>

DEBT OF THE CITY OF BOSTON AND THE COUNTY OF SUFFOLK,
JANUARY 31, 1909.

RECAPITULATION.

General City Debt, issued inside of debt limit:		
Fifteen-year Debt.....	\$1,300,000 00	
Highways, Making of, Debt, No. 1.....	4,093,201 00	
Public Park Debt.....	5,481,410 98	
Rapid Transit (Charlestown Bridge) Debt, No. 1.....	750,000 00	
Schoolhouses Debt, No. 2.....	13,573,525 00	
Separate Systems of Drainage Debt, No. 2,	255,000 00	
Sewerage Loan Debt, No. 2.....	300,000 00	
Ten-year Debt.....	210,500 00	
Twenty-year Debt.....	18,730,369 02	
Thirty-year Debt, No. 1.....	448,000 00	
Total City Debt, issued inside of debt limit.....	\$45,142,006 00	
General City Debt, issued outside of debt limit:		
Atlantic Avenue Debt.....	\$297,900 00	
Blue Hill and Other Avenues.....	2,260,000 00	
Cambridge Bridge Debt.....	1,350,800 00	
Charles River Basin Debt.....	800,000 00	
Highways, Making of, Debt, No. 2.....	7,127,000 00	
Improved Sewerage, Special.....	500,000 00	
New Ferry Landing Debt.....	500,000 00	
New Public Library, Special Debt.....	610,000 00	
Public Park, Special Debt.....	10,852,500 00	
Rapid Transit (Charlestown Bridge) Debt, No. 2.....	805,000 00	
Schoolhouses Debt, No. 1.....	755,000 00	
Separate Systems of Drainage Debt, No. 1,	3,300,000 00	
Sewerage Loan Debt, No. 1.....	8,449,000 00	
Stony Brook Improvement, Special.....	1,034,000 00	
Thirty-year Debt, No. 2.....	1,267,000 00	
Total City Debt, issued outside of debt limit.....	39,908,200 00	
Total General City Debt.....		\$85,050,206 00
Cochituate Water Debt, issued outside of debt limit.....		4,249,500 00
County of Suffolk, Serial Payment Debt, issued inside of debt limit.....	\$459,000 00	
County of Suffolk Debt, payable from Sinking Funds, issued outside of debt limit.....	2,921,000 00	
Total General City, Cochituate Water, and County Debt.....		3,380,000 00
Rapid Transit Debt, issued outside of debt limit:		\$92,679,706 00
Rapid Transit Debt.....	\$4,416,000 00	
Boston Tunnel and Subway Debt.....	7,956,700 00	
East Boston Tunnel Debt.....	3,193,000 00	
Riverbank Subway Debt.....	5,000 00	
Total Rapid Transit Debt, issued outside of debt limit,		15,570,700 00
*Total Debt.....		\$108,250,406 00
* Total Debt, as above.....		
Debt issued by the Commonwealth (chapter 534, Acts 1906) for enlarge- ment of Suffolk County Courthouse.....		236,000 00
		<u>\$108,486,406 00</u>

Total debt as per preceding page.....					\$108,250,406 00
In hands of City Treasurer to redeem matured debt:					1,000 00
City Debt overdue and unpaid					\$108,251,406 00
Less Sinking Funds as follows:					
General City Debt, issued inside of debt limit:					
Fifteen-Year Debt.....	\$123,874 97				
Highways, Making of, Debt, No. 1.....	876,841 27				
Public Park Debt.....	2,652,289 61				
Rapid Transit (Charlestown Bridge) Debt, No. 1	160,427 54				
Schoolhouses Debt, No. 2.....	2,727,834 53				
Separate Systems of Drainage, No. 2.....	16,778 39				
Sewerage Loan, No. 2	19,796 06				
Ten-Year Debt.....	214,486 01				
Twenty-Year Debt.....	9,177,802 01				
Thirty-Year Debt, No. 1.....	125,209 32				
Total Sinking Fund for debt issued inside of debt limit.....		\$16,095,339 71			
General City Debt, issued outside of debt limit:					
Atlantic Avenue Debt.....	\$321,304 66				
Blue Hill and Other Avenues	935,248 22				
Cambridge Bridge Debt.....	157,343 86				
Charles River Basin Debt.....	62,480 54				
Highways, Making of, Debt, No. 2	2,124,227 43				
Improved Sewerage Special.....	345,920 47				
New Ferry Landing Debt.....	229,901 35				
New Public Library Special Debt	418,933 22				
Public Park Special.....	4,530,339 49				
Rapid Transit (Charlestown Bridge) Debt, No. 2	190,613 82				
Schoolhouses Debt, No. 1.....	128,303 88				
Separate Systems of Drainage, No. 1.....	188,044 16				
Sewerage Loan, No. 1.....	2,155,395 99				
Stony Brook Improvement Special.....	399,880 33				
Thirty-Year Debt, No. 2.....	97,583 99				
Total Sinking Funds for City Debt issued outside of debt limit.....		12,285,521 41			
Cochituate Water Debt (outside of debt limit).....		3,637,956 71			
County of Suffolk Debt (outside of debt limit).....		1,199,467 08			
Total General City, Cochituate Water and County Sinking Funds			\$33,218,284 91		
Rapid Transit Debt, issued outside of debt limit:					
Rapid Transit.....	\$1,128,829 25				
Boston Tunnel and Subway Debt.....	267,761 81				
East Boston Tunnel Debt.....	239,557 59				
Total Sinking Funds for Rapid Transit Debt.....			1,636,148 65		
In hands of City Treasurer for redemption of matured debt.....			1,000 00		
				34,855,433 56	
*Net Debt.....				\$73,395,972 44	

* Net Debt as above. \$73,395,972 44
Debt issued by the Commonwealth (chapter 534, Acts 1906) for enlargement of Suffolk County Courthouse \$236,000 00
\$73,631,972 44

DEBT OF THE CITY OF BOSTON AND COUNTY OF SUFFOLK.

When due, and Amount of said Debt held by the Sinking
Funds as Investments.

DUE IN FINANCIAL YEAR.	Amount of Debt Due.	Amount of Debt held by the Sinking Funds as Investments.
1909-10.....	\$408,500 00	\$19,000 00
1910-11.....	278,000 00	17,000 00
1911-12.....	1,917,500 00	239,000 00
1912-13.....	3,045,925 00	854,200 00
1913-14.....	5,301,600 00	1,584,000 00
1914-15.....	1,769,300 00	1,324,800 00
1915-16.....	3,022,550 00	1,447,150 00
1916-17.....	2,817,800 00	905,500 00
1917-18.....	2,870,000 00	561,000 00
1918-19.....	2,077,780 00	766,480 00
1919-20.....	4,741,300 00	628,100 00
1920-21.....	1,187,000 00	470,300 00
1921-22.....	3,278,650 00	1,596,100 00
1922-23.....	4,372,900 00	2,074,500 00
1923-24.....	2,995,075 00	558,000 00
1924-25.....	3,268,725 00	285,000 00
1925-26.....	1,420,000 00	859,500 00
1926-27.....	1,845,900 00	642,150 00
1927-28.....	3,291,700 00	497,700 00
1928-29.....	3,109,650 00	1,699,000 00
1929-30.....	4,158,800 00	651,000 00
1930-31.....	2,474,550 00	779,000 00
1931-32.....	3,095,000 00	3,054,200 00
1932-33.....	4,451,301 00	1,047,000 00
1933-34.....	3,325,000 00	1,817,000 00
1934-35.....	1,826,500 00	911,000 00
1935-36.....	5,011,000 00	533,500 00
1936-37.....	5,915,000 00	449,000 00
1937-38.....	5,402,000 00	1,974,600 00
1938-39.....	1,617,900 00	250,000 00
1939-40.....	1,050,000 00	10,000 00
1940-41.....	250,000 00	
1941-42.....	456,000 00	456,000 00
1942-43.....	1,000,000 00	300,000 00
1943-44.....	1,550,000 00	50,000 00
1944-45.....	4,892,000 00	150,000 00
1945-46.....	3,710,700 00	326,000 00
1946-47.....	1,738,150 00	577,150 00
1947-48.....	1,540,850 00	776,300 00
1948-49.....	2,001,800 00	
Totals, January 31, 1909..	*\$108,486,406 00	\$31,140,230 00

* Includes debt issued by the Commonwealth (chapter 534, Acts 1906) for enlargement of Suffolk County Courthouse, \$236,000.

INTEREST PAYABLE ON DEBT DURING FINANCIAL YEAR 1909-10. (ESTIMATED.)

CLASS OF LOAN.	April, 1909.	May, 1909.	June, 1909.	July, 1909.	October, 1909.	November, 1909.	December, 1909.	January, 1910.	Total.
City.....	\$352,211	\$4,470	\$275,855	\$739,175	\$352,215	\$4,470	\$275,855	\$735,723	\$2,739,974
Highways, Making of.....	18,075	.....	48,703	134,415	18,075	.....	48,703	134,415	402,386
Rapid Transit.....	63,250	.....	33,828	37,578	63,250	.....	33,828	37,578	269,312
Riverbank Subway.....	100	.....	.....	.....	100	.....	.....	.....	200
Boston Tunnel and Subway..	19,672	.....	65,183	65,605	19,672	.....	65,183	65,605	300,920
* County	50,385	.....	.....	10,670	50,385	.....	.....	10,670	122,110
Water.....	58,175	1,855	.....	22,790	58,175	1,855	.....	21,510	164,360
Totals.....	\$561,868	\$6,325	\$423,569	\$1,010,233	\$561,872	\$6,325	\$423,569	\$1,005,501	\$3,999,262

* Interest due Commonwealth of Massachusetts on debt issued for enlargement of Suffolk Courthouse, in 1909: March, \$4,130; September, \$3,990.

TOTAL RECEIPTS AND PAYMENTS OF TREASURY DEPARTMENT FOR TWENTY YEARS.

STATEMENT OF THE RECEIPTS AND PAYMENTS FOR TWENTY YEARS.

YEAR.	Balance on hand at the Commencement of each Financial Year.	Receipts.	Payments.	Total Receipts and Payments.
1888-89.....	\$3,789,333 21	\$22,940,943 25	\$23,671,438 95	\$46,612,382 20
1889-90.....	3,058,837 51	25,075,514 96	22,903,033 20	47,978,548 16
1890-91.....	5,231,319 27	22,296,312 93	22,574,312 36	44,870,625 29
Nine months, { 1891-92 }	May 1, 1891, to 4,953,319 84	Jan. 31, 1892 } 19,696,853 37 }	21,549,375 42	41,246,228 79
1892-93.....	3,100,797 79	29,083,217 95	29,965,097 07	59,048,315 02
1893-94.....	2,218,918 67	37,598,979 09	36,844,214 19	74,443,193 28
1894-95.....	2,973,683 57	32,833,603 12	32,400,898 96	65,234,502 08
1895-96.....	3,406,387 73	32,637,998 28	32,497,606 34	65,135,604 62
1896-97.....	3,546,779 67	36,742,624 80	35,495,554 26	72,238,179 06
1897-98.....	4,793,850 21	37,600,127 68	38,299,625 23	75,899,752 91
1898-99.....	4,094,352 66	40,587,085 24	40,203,678 34	80,790,763 58
1899-1900.....	4,477,759 56	41,269,483 10	40,629,608 82	81,899,091 92
1900-01.....	5,117,633 84	43,519,447 26	45,391,700 41	88,911,147 67
1901-02.....	3,245,380 69	53,457,553 21	53,299,169 25	106,756,722 46
1902-03.....	3,403,764 65	44,414,690 44	42,175,190 02	86,589,880 46
1903-04.....	5,643,265 07	42,242,496 31	43,957,187 67	86,199,683 98
1904-05.....	3,928,573 71	41,529,949 65	42,712,974 24	84,242,923 89
1905-06.....	2,745,549 02	46,292,976 66	46,227,958 35	92,520,935 01
1906-07.....	2,810,567 43	45,259,969 41	45,147,066 80	90,407,036 21
1907-08.....	2,923,470 04	46,855,477 75	47,066,234 21	93,921,711 96
1908-09.....	2,712,713 58	42,931,551 52	42,845,498 76	85,777,050 28
Cash balance January 31, 1909				\$2,798,766 34

TRUST FUNDS.

The City Treasurer had in his possession January 31, 1909, as treasurer and as custodian, the following trust funds, viz.:

BABCOCK MUSIC FUND.

By the will of ARCHIBALD BABCOCK, who died August 10, 1862, the sum of \$3,000 was bequeathed to the City of Charlestown, and accepted by the City Council of that city November, 1862, upon the conditions and for the purposes expressed by him in his last will and testament.

"The income to be annually expended in procuring the services of musicians, or of a band or bands of musicians, to perform in public in the City of Charlestown, within its present limits, free to all its citizens, one-half of said income to be annually expended in procuring musicians, or band or bands of musicians, to play on or near the small common at the 'Neck,' so called, at the corner of Main and Cambridge streets, preference to be given to citizens of Charlestown, due regard being had as to ability and quality."

Deposits in the Charlestown Five Cents Savings Bank:

Principal	\$3,000 00
Interest	110 12
	<u>\$3,110 12</u>

BILLINGS WESTERLY CEMETERY TRUST FUND.

Gift of \$5,000 made to City of Boston by Thomas Minns, surviving executor of the will of ROBERT CHARLES BILLINGS, from the remainder of the estate distributed by him in accordance with the terms of said will and decrees of the Supreme Judicial Court, dated April 1, 1903, and May 26, 1904. By order of City Council, approved August 6, 1904, the city accepted said gift, making said sum a permanent fund for the care and improvement of the Westerly Cemetery, Centre street, West Roxbury, and the City Treasurer was authorized on behalf of the city to accept the above legacy and to invest the same and pay the income thereof to the Board of Cemetery Trustees, to be expended by them for the care and improvement of said Westerly Cemetery in accordance with the condition of said gift.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1924, interest at three and one-half per cent per annum	<u>\$5,000 00</u>
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CITY HOSPITAL FUNDS.

BALL FUND:—Bequest of JONAS BALL, the interest of which is to furnish clothing to indigent patients when leaving the hospital.

Invested in one certificate of indebtedness of City of Boston, due July 1, 1919, interest at four per cent per annum	<u>\$1,000 00</u>
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BOLTON FUND.—Legacy of the late WILLIAM T. BOLTON of Chelsea, of \$500 to be known as the "Bolton Fund," the interest of which is to be expended for the benefit of free beds in the Boston City Hospital. Received November 12, 1906, from Charles Leed, executor, through the Trustees

of the City Hospital, \$555.22, which includes accrued interest, amounting to \$55.22. By vote of the Trustees of the City Hospital, November 23, 1906, this sum of \$555.22 was divided, the legacy of \$500 to be invested in city funds and the \$55.22 income transferred to maintenance appropriation for the current financial year.

Invested in one certificate of indebtedness of the City of Boston, due December 1, 1926, interest at three and one- half per cent per annum	<u>\$500 00</u>
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BURNHAM BUILDING FUND.—Bequest of the late LAMONT G. BURNHAM to the Boston City Hospital, to construct and equip upon the hospital grounds a building to be known as the Lamont G. Burnham Ward, for such uses and purposes as the trustees of said hospital shall, in their discretion, determine. Received December 5, 1904, from Maria A. Burnham, William M. Bunting and H. B. Sprague, executors under the will of Lamont G. Burnham, through the Trustees of the City Hospital, \$153,750. Add interest on deposit to January 1, 1909, \$13,360.22, makes a total of \$167,110.22. From this amount has been paid on account of building \$157,918.11, leaving \$9,192.11 on deposit in Commonwealth Trust Company.

BURRELL ETHER PRIZE FUND.—Amount received from TOWNSEND WILLIAM THORNDIKE as follows: "I hereby give to the Trustees of the Boston City Hospital the sum of \$1,000, to found the 'Herbert L. Burrell Ether Prize Fund.' From the interest of this fund I desire that money prizes shall be given semi-annually to the surgical house officer who administers ether or other anæsthetic in the most skilful and humane manner. Only surgical house officers of the Boston City Hospital shall be eligible to compete. The award is to be made by three judges, these to be appointed by the senior surgeon and the superintendent of the hospital. In case no house officer is considered worthy of the prize the interest shall be added to the principal. Should the principal increase to such an amount as shall be considered sufficient to warrant the offering of a second prize of a lesser amount such second prize shall be established, and shall be known as the 'William H. Thorndike Ether Prize Fund.' The sixteenth day of October being the anniversary of the discovery of anæsthesia, that date shall be one of the days on which a prize shall be awarded."

Invested in one certificate of indebtedness of City of Boston, due January 1, 1917, interest at four per cent per annum . . .	<u>\$1,000 00</u>
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MARTHA HOWARD THURSTON CARTER FUND.—Donation by the daughters of the late CHARLES M. CARTER of two American Telephone and Telegraph Company's four per cent collateral bonds, Nos. 26130 and 26131, \$1,000 each; principal due July 1, 1929. Received March 28, 1903, from Trustees of the City Hospital. These bonds to constitute a trust fund to be known as "the Martha Howard Thurston Carter Fund." The interest on said bonds is to be paid to the president of the trustees for the time being, and the same to be used for the purchase of books and reading matter for the nurses in the Boston City Hospital.

Invested as above	<u>\$2,000 00</u>
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CHEEVER FUND.—Donations by DR. DAVID W. CHEEVER, one of \$2,000, accepted by the Trustees March 20, 1889; the other of \$1,000, received by City Treasurer May 1, 1897, the income of both to be expended as per following extract from his letter and as per letter from Trustees of City Hospital April 24, 1897:

"To purchase and present to each house surgeon when his term of service expires a small case (pocket case) of surgical instruments as a gift from me."

Invested in certificates of indebtedness of City of Boston, with rates of interest as follows:

One due April 1, 1917, four per cent per annum	\$1,000 00
One due January 1, 1919, four per cent per annum	2,000 00
	<u>\$3,000 00</u>

SILAS DURKEE FUND.—Bequest of the late SILAS DURKEE, of Boston, explained by the following extract from the will: "All the rest and residue of my estate and property I give, devise, and bequeath to the City of Boston to have and to hold the same to said City of Boston and its successors . . . in trust, for the benefit of the Boston City Hospital forever." Received June 15, 1900, through the Trustees of the City Hospital, \$15,050.

Invested in one certificate of indebtedness of the City of Boston, due July 1, 1930, interest at three per cent per annum .	<u>\$15,050 00</u>
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DANIEL S. FORD FUND.—Bequest of the late DANIEL S. FORD, of Boston, the same to be known as the "Daniel S. Ford Fund," and the interest of the same to be used for the purposes of the hospital.

Received from William A. Munroe, Seth Mendell and Henry Hinckley, executors of estate of Daniel S. Ford, through Trustees of the City Hospital, August 29, 1900, \$6,000.

Invested in one certificate of indebtedness of the City of Boston, due October 1, 1930, interest at three per cent per annum	<u>\$6,000 00</u>
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GOODNOW FUND.—A bequest of ELISHA GOODNOW, of South Boston, who died in 1851. By his will the city came into possession of certain real estate on Cross street and Third street for the purpose of establishing a hospital for the sick, one-half of said funds to be applied for the establishment and maintenance of free beds, which should always be at the disposal and under the control of the officers of the government of said hospital for the time being. The proceeds from the sale of these estates and accumulated interest were invested in certificates of indebtedness of City of Boston, with rates of interest as follows:

One due April 1, 1913, four per cent per annum	\$16,500 00
One due April 1, 1915, four per cent per annum	4,500 00
One due October 1, 1917, four per cent per annum	4,000 00
One due April 1, 1946, three and one-half per cent per annum,	1,000 00
	<u>\$26,000 00</u>

GOODNOW LIBRARY FUND.—Donation of GEORGE GOODNOW, the interest of which is to be expended annually by the Board of Trustees in replenishing the library of the hospital with books and pamphlets suitable for the reading of the patients during convalescence.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1913, interest at four per cent per annum	<u>\$1,000 00</u>
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HEMENWAY FUND.—Donation of MRS. ELLEN L. HEMENWAY, for the support of a free bed in the City Hospital in memory of her late husband, Charles P. Hemenway.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1923, interest at four per cent per annum	<u>\$5,000 00</u>
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NICHOLS FUND.—Bequest of LAWRENCE NICHOLS, who died in September, 1862, of \$1,000, less internal revenue tax, "towards the establishment and endowment of a City Hospital," and from the executor of the will as a residuary legatee, \$530.50. These amounts and accumulated interest were invested in

One certificate of indebtedness of City of Boston, due April 1, 1913, interest at four per cent per annum	\$1,000 00
One certificate of indebtedness of City of Boston, due July 1, 1947, interest at four per cent per annum	1,000 00
	<u>\$2,000 00</u>

NORCROSS FUND.—Donation of OTIS NORCROSS, formerly Mayor of the city, the interest of which is to furnish clothing to indigent patients when leaving the hospital.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1917, interest at four per cent per annum	<u>\$2,000 00</u>
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PERKINS FUND.—Bequest of MARY G. PERKINS, the income of which is to be expended for Medical Library and artificial limbs and surgical appliances, for the use of patients leaving the hospital.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1919, interest at four per cent per annum	<u>\$7,500 00</u>
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SHAW FUND.—Bequest of MARY LOUISA SHAW, the income of which is to be expended by the trustees for the purchase of flowers and fruit for the use and comfort of patients in the hospital.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1945, interest at three and one-half per cent per annum	<u>\$2,000 00</u>
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HETTIE LANG SHUMAN MEMORIAL LIBRARY FUND.—Amount contributed by the daughters, sons and sons-in-law of the late Hettie Lang Shuman, wife of Abraham Shuman, Esq., as a memorial to her, to constitute a special fund, to be known as the "HETTIE LANG SHUMAN MEMORIAL LIBRARY FUND," the interest of which shall be annually expended in perpetuity by the trustees for new books for the use of hospital patients, for the replacing of volumes that have become either damaged, lost or destroyed, and for the maintenance of the book-plate which they have adopted and presented. Received from the Trustees of the City Hospital, May 18, 1906, \$2,000.

Invested in one certificate of indebtedness of City of Boston, due June 1, 1926, interest at three and one-half per cent per annum	<u>\$2,000 00</u>
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WYMAN FUND.—Received May 19, 1906, from C. H. Watson, ancillary administrator of estate of E. L. Wyman, through Trustees of the City Hospital, one hundred and fifty dollars, the same being income from the estate of E. L. Wyman. This money is the rest and residue of the Wyman estate, and it was voted by the Trustees of the City Hospital, May 24, 1906, "That said income already received, or any hereafter received, be deposited to the account of 'Hospital Building Improvements.'"

Cash in City Treasury	<u>\$150 00</u>
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RECAPITULATION OF CITY HOSPITAL TRUST FUNDS.

Ball Fund	\$1,000 00
Bolton Fund	500 00
Burrell Ether Prize Fund	1,000 00
Martha Howard Thurston Carter Fund	2,000 00
Cheever Fund	3,000 00
Silas Durkee Fund	15,050 00
Daniel S. Ford Fund	6,000 00
Goodnow Fund	26,000 00
Goodnow Library Fund	1,000 00
Hemenway Fund	5,000 00
Nichols Fund	2,000 00
Norcross Fund	2,000 00
Perkins Fund	7,500 00
Shaw Fund	2,000 00
Hettie Lang Shuman Memorial Library Fund	2,000 00
Total invested funds	\$76,050 00
Burnham Fund, cash	9,192 11
Wyman Fund, cash	150 00
	<u>\$85,392 11</u>

DORCHESTER NORTH BURIAL GROUND TRUST FUND.

Amount paid by the owners of lots in Dorchester North Burial Ground, the income of which is to be expended for the perpetual care of said lots.

Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

One due October, 1921, three per cent per annum	\$200 00
One due October 1, 1922, three and one-half per cent per annum	200 00
One due June 1, 1923, three and one-half per cent per annum	200 00
One due January 1, 1924, three and one-half per cent per annum	100 00
One due April 1, 1928, four per cent per annum	300 00
One due June 1, 1928, four per cent per annum	100 00
One due January 1, 1930, three and one-half per cent per annum	500 00
One due July 1, 1930, three per cent per annum	100 00
One due October 1, 1937, four per cent per annum	100 00
One due October 1, 1937, four per cent per annum	350 00
One due October 1, 1938, four per cent per annum	200 00
One due January 1, 1945, three and one-half per cent per annum	300 00
One due April 1, 1945, three and one-half per cent per annum	100 00
One due July 1, 1947, four per cent per annum	100 00
One due January 1, 1949, three and one-half per cent per annum	400 00
	<u>\$3,250 00</u>
Cash in City Treasury	56 00
	<u>\$3,306 00</u>

DORCHESTER SOUTH CEMETERY TRUST FUND.

Amount paid by the owners of lots in Dorchester South Cemetery, the income of which is to be expended for the perpetual care of said lots.

Invested in certificates of indebtedness of the City of Boston, maturing and bearing interest as follows:

One due April 1, 1913, four per cent per annum	\$300 00
One due January 1, 1916, four per cent per annum	100 00
One due January 1, 1922, three per cent per annum	150 00
One due July 1, 1930, three per cent per annum	100 00
	\$650 00
Cash in City Treasury	48 00
	<u>\$698 00</u>

EVERGREEN CEMETERY FUND.

Amount paid by the owners of lots in Evergreen Cemetery, the income of which is to be expended for the perpetual care of lots.

Invested in certificates of indebtedness of the City of Boston as follows:

DATE OF MATURITY.	Rate of Interest, Per cent.	Amount.	DATE OF MATURITY.	Rate of Interest, Per cent.	Amount.
July 1, 1909...	3½	\$500 00	<i>Brought forward,</i>		\$7,200 00
April 1, 1913...	4	200 00	January 1, 1930...	3½	1,100 00
October 1, 1914...	4	500 00	July 1, "...	3	350 00
January 1, 1916...	4	100 00	October 1, "...	3	100 00
October 1, 1917...	4	500 00	April 1, 1932...	3	800 00
January 1, 1918...	3½	300 00	October 1, "...	3½	1,200 00
July 1, 1919...	3½	100 00	July 1, 1935...	3½	400 00
November 15, "...	3½	200 00	April 1, 1937...	4	300 00
January 1, 1921...	3	200 00	October 1, "...	4	700 00
October 1, "...	3	800 00	" "...	4	300 00
June 1, 1923...	3½	500 00	" 1, 1938...	4	300 00
October 1, "...	4	800 00	January 1, 1945...	3½	500 00
" "...	4	100 00	April 1, "...	3½	500 00
" "...	3½	800 00	July 1, 1947...	4	300 00
January 1, 1924...	3½	200 00	" "...	4	200 00
June 1, 1926...	3½	600 00	January 1, 1949...	3½	500 00
December 1, "...	3½	200 00			
April 1, 1928...	4	200 00	Cash in City Treasury		\$14,750 00
June 1, "...	4	400 00	ury.....		86 31
<i>Carried forward</i> ...		\$7,200 00			
					<u>\$14,836 31</u>

FITZGERALD FIREMEN'S GOLD MEDAL FUND.

Legacy of the late JOHN E. FITZGERALD, for several years one of the Board of Fire Commissioners of the City of Boston. The legacy is to constitute a fund to be in the custody of the City Treasurer, to be invested and reinvested by him. The income is to be paid annually to the Fire Commissioner and by him used to buy a gold medal to be presented to the fireman who, in the judgment of the said Commissioner, has performed the most meritorious act, and whose conduct has called for special mention. Accepted by City Council by order approved May 9, 1905.

Invested in one registered certificate of indebtedness of the Commonwealth of Massachusetts, due January 1, 1941, interest at three per cent per annum	<u>\$1,000 00</u>
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THOMAS FITZGERALD FUND.

Gift of one thousand dollars by JOHN F. FITZGERALD, while Mayor of the City of Boston, to the City of Boston, accepted by Board of Managers of the Franklin Fund, October 19, 1906, as per the following vote:

Resolved, That the Board of Managers of the Franklin Fund accept the gift of one thousand (1,000) dollars for the benefit of the City of Boston, made by his Honor, Mayor John F. Fitzgerald, to be held by them and their successors under the following conditions:

1. It is to be invested and reinvested from time to time for one hundred years in such investments as men of prudence, discretion and intelligence invest their own money, having due regard both for the probable income from, and the probable safety of, the money invested.

2. At the end of one hundred years, the fund then accumulated shall be expended by the managers of the Franklin Fund or their successors for some public purpose of use to the citizens of Boston.

3. The fund shall be known as the "Thomas Fitzgerald Fund," in honor of the father of Mayor John F. Fitzgerald, and the gift which shall inure to the City of Boston at the end of the period of one hundred years shall have the same name. Received by the City Treasurer April 1, 1907.

Invested in one certificate of indebtedness of the City of Boston, due April 1, 1947, interest at four per cent per annum	<u>\$1,000 00</u>
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FOSS SEVENTEENTH OF JUNE AND FLAG FUNDS.

The City Council of the City of Charlestown, in August, 1866, accepted the bequest made in the will of JACOB FOSS, who died in Charlestown, June 2, 1866, the income of which is to be expended for the following purposes:

Celebrating the anniversary of the Battle of Bunker Hill, for either or all of the following purposes, viz.: "*Ringing the bells, firing salutes, music, or decorating the streets.*"

Invested in one certificate of indebtedness, City of Boston, due October 1, 1917, interest at four per cent per annum,	<u>\$2,000 00</u>
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Purchasing "United States flags for the use of the City of Charlestown within its present limits; the flags so purchased to be used on all proper occasions, so that no more than two years' purchases shall be on hand at any time."

Invested in one certificate of indebtedness, City of Boston, due October 1, 1917, interest at four per cent per annum,	<u>\$2,000 00</u>
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JOHN FOSTER TRUST FUND.

Received October 14, 1898, from Charles U. Cotting and Herbert Nash, surviving executors of the will of JOHN FOSTER, deceased, late of Boston, thirty thousand (30,000) dollars. Said amount to be devoted to the object as set forth in the will of said Foster, viz.: "I give and bequeath to the City of Boston thirty thousand (30,000) dollars, or so much as may be necessary for the purpose of erecting a monumental statue of the late Reverend William Ellery Channing, with a canopy over the same, to be placed in the Public Garden opposite the Arlington Street Church."

Amount received as above	\$30,000 00
Interest on deposit to January 1, 1909	2,790 78
	<u>\$32,790 78</u>
Paid on account of erection of statue	32,322 50
	<u>\$468 28</u>
Amount of fund January 31, 1909, deposited in Mechanics Trust Company	<u>\$468 28</u>

FRANKLIN FUND.

This fund was created by a codicil of the will of Benjamin Franklin, dated June 23, 1789.

In accordance with a decree of the Supreme Judicial Court for the Commonwealth, rendered November 25, 1903, the following persons were created a Board of Managers of the Franklin Fund: The rector of Christ Church in Boston and the ministers of the First Church in Boston and the First United Presbyterian Church, together with the Mayor of the City of Boston and the following eight persons — Richard Olney, William Endicott, Henry P. Bowditch, Henry S. Pritchett, Nathan Matthews, Jr., Charles T. Gallagher, James J. Storrow and Frank K. Foster.

The Board of Managers chose the City Treasurer as treasurer of the fund, and it is now in his custody.

The fund consists of two parts, the first and larger part being immediately available to be expended by the Board of Managers, in accordance with the wishes of Franklin as expressed in his will, while the other part is to be kept invested and is to accumulate until the year 1994, when it is to be divided between the Commonwealth of Massachusetts and the City of Boston.

On January 31, 1909, the two parts of the funds were as follows:

First Part.

One certificate of indebtedness of the City of Boston, due January 1, 1945, interest at three and one-half per cent per annum	\$47,000 00
Deposit in Second National Bank	17,475 70
	<u>\$64,475 70</u>
Amount of fund January 31, 1908	\$314,618 17
Interest on deposit to January 1, 1909	182 99
	<u>\$314,801 16</u>
Loss on sale of \$265,000 City of Boston bonds for \$244,719.30,	20,280 70
	<u>\$294,520 46</u>
Expended 1908-09, principally on account of erection of Franklin Institute Building	236,448 56
	<u>\$58,071 90</u>
Interest on bonds	6,368 80
Revenue, sale of material	35 00
	<u>\$64,475 70</u>

Second Part.

Deposits in Massachusetts Hospital Life Insurance Company Policy, A-2	\$178,221 77
A-3	5,301 20
	<u>\$183,522 97</u>
Deposits in Suffolk Savings Bank	1,542 10
	<u>\$185,065 07</u>

FRANKLIN INSTITUTE, ANDREW CARNEGIE DONATION.

Donation of ANDREW CARNEGIE, ESQ., for the endowment of the proposed Franklin Institute. Received December 2, 1905, by City Treasurer,

registered United States Steel Corporation five per cent bonds due April 1, 1951, as follows:

4	\$100,000 each	.	.	.	.	.	.	.	.	.	.	\$400,000	00
1	5,000	.	.	.	.	.	.	.	.	.	.	5,000	00
3	1,000 each	.	.	.	.	.	.	.	.	.	.	3,000	00
												<u>\$408,000</u>	<u>00</u>
Cash, now on deposit in Suffolk Savings Bank												396	48
Total principal												<u>\$408,396</u>	<u>48</u>
Received to January 31, 1909:													
Interest on bonds												68,053	55
Interest on deposit												1,255	73
												<u>\$477,705</u>	<u>76</u>
Running expenses of Franklin Union to January 31, 1909												6,220	81
												<u>\$471,484</u>	<u>95</u>

Of the amount received for interest \$26,000 has been invested in one certificate of indebtedness of the City of Boston, due April 1, 1947, interest at four per cent per annum, and \$26,082 in one certificate of indebtedness of City of Boston, due January 1, 1945, at three and one-half per cent per annum for \$28,000.

Invested	.	.	.	.	.	.	.	.	.	.	.	\$460,478	48
Cash on deposit in Merchants National Bank	.	.	.	.	.	.	.	.	.	.	.	9,439	68
Cash vouchers in City Treasury	.	.	.	.	.	.	.	.	.	.	.	1,566	79
												<u>\$471,484</u>	<u>95</u>

CHARLES E. FRENCH FUNDS.

Bequests of the late CHARLES E. FRENCH, of Boston, for the following named purposes: \$10,000 in trust, to be invested in City of Boston bonds, the income thereof to be expended in the care of the Granary, King's Chapel, Boston Common and Copp's Hill Burial Grounds.

Invested in one certificate of indebtedness of the City of Boston, due April 1, 1947, interest at four per cent per annum	.	.	.	.	.	.	.	.	.	.	.	<u>\$10,000</u>	<u>00</u>
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Three thousand dollars in trust, to be invested in City of Boston bonds, annual income from which to be devoted to repairs (but not improvements) on the Old State House, State street, Boston.

Invested in one certificate of indebtedness of the City of Boston, due April 1, 1947, interest at four per cent. per annum	.	.	.	.	.	.	.	.	.	.	.	<u>\$3,000</u>	<u>00</u>
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Five thousand dollars in trust, to be invested in City of Boston bonds, the income to be devoted to the care of the oldest and largest trees on Boston Common, to preserve them from the woodman's axe.

Invested in two certificates of indebtedness of the City of Boston, \$4,000 due April 1, 1937, \$1,000 due April 1, 1947, interest at four per cent per annum	.	.	.	.	.	.	.	.	.	.	.	<u>\$5,000</u>	<u>00</u>
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Accepted by City Council by order approved April 27, 1907, and money received from Otis Norcross and Solomon P. Stratton, executors of the will of Charles E. French, April 29, 1907.

GEORGE B. HYDE FUND.

Amount received from executor of estate of GEORGE B. HYDE, being a legacy from said GEORGE B. HYDE, for the purpose of erecting a statue of Rufus Choate, and providing a suitable pedestal and foundation for

the same. The amount of legacy, \$14,000, with the income thereof, by order of the City Council, to be invested, and, on order of the Mayor, to be applied to the purchase and erection of said statue.

Amount of funds invested in city bonds February 1, 1896,

at par	\$14,000 00
Less bonds sold	12,000 00
Balance	\$2,000 00
Add proceeds of bonds sold, as follows:	
July 21, 1896, sold one bond of \$1,000 at 107	\$1,070 00
December 1, 1897, sold two bonds of \$2,000 each, at 114.25	4,570 00
December 1, 1897, sold one bond of \$1,000 at 114.25	1,142 50
February 21, 1899, sold two bonds of \$2,000 each, and two bonds of \$1,000 each, at 117	7,020 00
	13,802 50
Interest on investment	2,753 45
Total	\$18,555 95
Expended for statue	14,000 00
Amount of fund January 31, 1909	<u>\$4,555 95</u>

Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

Two due January 1, 1925, four per cent per annum, \$1,000 each	\$2,000 00
Cash in City Treasury	2,555 95
	<u>\$4,555 95</u>

ELLEN C. JOHNSON BEQUEST.

Legacy contained in the will of ELLEN C. JOHNSON, late of Sherborn, Mass., and who was for some years superintendent of the Women's Prison in said place, of the residue of her estate to the City of Boston for the construction and erection of a drinking fountain. Accepted by order of the City Council, approved by the Mayor, April 2, 1902. Said order appropriates the amount of legacy for constructing and erecting and maintaining said drinking fountain according to the provisions of the will, in accordance with such plans and in such places as the executrix may designate, provided that the same be approved by the Mayor and Board of Art Commissioners.

Received from Margaret P. Russell, executrix:

September 30, 1902	\$18,500 00
October 7, 1902	7,500 00
February 10, 1904	2,996 72
	\$28,996 72
Income on investment	486 14
	\$29,482 86
Expended for the above purposes to January 31, 1909	25,551 24
Amount of fund January 31, 1909	<u>\$3,931 62</u>
Invested in one certificate of indebtedness of City of Boston, due October 1, 1923, interest at three and one-half per cent per annum	\$3,000 00
Cash in City Treasury	931 62
	<u>\$3,931 62</u>

JOHN LARKIN FUND.

Bequest of JOHN LARKIN to Town of Charlestown of two shares of Union Bank (now National Union Bank), dividends payable to First Parish Congregational Church of Charlestown (formerly called First Church of Christ), for relief of the poor in the Town of Charlestown, in accordance with term of will of said Larkin, dated September 22, 1807. The certificate received by City Treasurer December 13, 1904. Par value, \$200.

MOUNT HOPE CEMETERY FUND.

Amounts paid by owners of lots in Mount Hope Cemetery, the income from which is to be expended by the trustees for the perpetual care of lots. Invested in certificates of indebtedness of City of Boston as follows:

DATE OF MATURITY.			Rate of Interest, Per cent.	Amount.	DATE OF MATURITY.			Rate of Interest, Per cent.	Amount.
October	1, 1911...	4		\$1,000 00	<i>Brought forward</i> ...				\$59,475 00
April	1, 1914...	4		1,000 00	June	1, 1926...	3½		1,300 00
October	1, "...	4		1,500 00	October	1, "...	3½		1,400 00
"	1, 1915...	4		3,000 00	December	1, "...	3½		250 00
January	1, 1916...	4		4,500 00	January	1, 1927...	3½		200 00
April	1, "...	4		1,000 00	April	1, 1928...	4		600 00
July	1, "...	4		1,000 00	June	1, "...	4		500 00
October	1, "...	4		3,000 00	"	"...	4		2,000 00
April	1, 1917...	4		1,000 00	October	1, "...	3½		6,000 00
"	"...	4		2,000 00	April	1, 1929...	3½		2,000 00
October	1, "...	4		1,000 00	January	1, 1930...	3½		1,200 00
"	"...	4		2,000 00	July	1, "...	3		2,900 00
January	1, 1918...	3½		1,900 00	"	"...	3		100 00
July	1, "...	4		1,500 00	October	1, "...	3		1,500 00
October	1, "...	4		1,000 00	"	"...	3		850 00
April	1, 1919...	4		1,000 00	April	1, 1932...	3		2,500 00
July	1, "...	4		1,000 00	October	1, "...	3½		2,001 00
"	"...	3½		1,100 00	January	1, 1935...	3½		1,500 00
November 15,	"...	3½		1,400 00	July	1, "...	3½		3,600 00
October	1, 1920...	4		3,000 00	June	1, 1936...	3½		1,000 00
"	"...	4		1,000 00	April	1, 1937...	4		400 00
"	"...	4		2,000 00	"	"...	4		200 00
January	1, 1921...	3		500 00	October	1, "...	4		1,800 00
October	1, "...	3		3,500 00	"	"...	4		650 00
January	1, 1922...	3½		400 00	"	"...	4		450 00
October	1, "...	4		1,000 00	"	1938...	4		1,300 00
"	"...	3½		2,000 00	"	"...	4		100 00
"	"...	3½		1,500 00	January	1, 1945...	3½		400 00
June	1, 1923...	3½		1,000 00	April	1, "...	3½		2,100 00
"	"...	3½		300 00	"	1, 1946...	3½		1,000 00
"	"...	3½		1,000 00	July	1, 1947...	4		1,200 00
October	1, "...	4		2,000 00	"	"...	4		400 00
"	"...	4		1,700 00	"	"...	4		500 00
"	"...	4		2,900 00	January	1, 1949...	3½		900 00
January	1, 1924...	3½		1,300 00					\$102,276 00
"	1, "...	3½		1,800 00	Cash in City Treasury, ...				17 07
October	1, "...	4		1,225 00					\$102,293 07
January	1, 1926...	3½		450 00					
<i>Carried forward</i>				\$59,475 00					

PHILLIPS STREET FUND.

This is a bequest of JONATHAN PHILLIPS, who died in July, 1860, who gave by his will to the City of Boston \$20,000, "as a trust fund, the income of which will be annually expended to adorn and embellish the streets and public places in said city," which has been invested in certificates of indebtedness of the City of Boston payable to the Mayor of the city for the time being, maturing and bearing interest as follows:

One due January 1, 1926, interest at three and one-half per cent per annum	\$7,000 00
One due January 1, 1936, interest at three and one-half per cent per annum	13,000 00
	<u>\$20,000 00</u>

POLICE CHARITABLE FUND.

By orders of the City Council, approved July 7, 1890, the principal and income of the fund known as the Police Charitable Fund, consisting of moneys which had been earned by police officers for fees as witnesses in Municipal and District Courts of the City of Boston, were placed in charge of the City Treasurer, as custodian. The Police Commissioner expends the income thereof, and the amount appropriated for pensions of police, for the payment of pensions of members of the police force who have been placed on the pension roll, and, with the approval of the Mayor, for the relief of persons who have received an honorable discharge from the police force by reason of sickness, age or other disability, and who are, in consequence thereof, in necessitous circumstances; and also for the relief of the widows and orphans, in necessitous circumstances, of police officers who have died while in the service of the city, or from the effects of injuries received in the execution of their duty. No additions have been made to this fund since 1890.

Invested in certificates of indebtedness of City of Boston as follows:

DATE OF MATURITY.			Rate of Interest, Per cent.	Amount.	DATE OF MATURITY.			Rate of Interest, Per cent.	Amount.
October	1, 1911...	4		\$5,000 00	<i>Brought forward.</i>				\$104,300 00
July	1, 1912...	4		4,000 00	July	1, 1920...	4		4,600 00
October	1, "...	4		5,000 00	October	1, "...	4		1,000 00
April	1, 1914...	4		5,000 00	"	"...	4		1,500 00
October	1, "...	4		6,000 00	"	1, 1921...	4		3,500 00
April	1, 1915...	4		4,500 00	"	"...	4		1,000 00
"	"...	4		1,500 00	"	1, 1922...	3½		5,000 00
October	1, "...	4		6,000 00	June	1, 1923...	3½		7,000 00
April	1, 1916...	4		5,000 00	October	1, "...	4		4,000 00
October	1, "...	4		6,300 00	"	"...	4		1,000 00
April	1, 1917...	4		5,000 00	"	1, 1926...	3½		4,000 00
October	1, "...	4		7,500 00	April	1, 1928...	4		3,000 00
"	"...	4		7,000 00	"	1, 1929...	3½		4,500 00
January	1, 1918...	4		3,000 00	October	1, 1930...	3		14,400 00
"	"...	4		2,000 00	January	1, 1931...	3		3,000 00
April	1, "...	4		300 00	October	1, "...	3		5,000 00
July	1, "...	4		3,500 00	April	1, 1932...	3		10,000 00
October	1, "...	4		3,500 00	October	1, "...	3½		1,800 00
January	1, 1919...	4		3,000 00	"	"...	3½		4,200 00
April	1, "...	4		3,000 00	April	1, 1945...	3½		16,000 00
July	1, "...	4		1,200 00	"	1, 1946...	3½		4,750 00
November	15, "...	3½		12,000 00	"	1, 1947...	4		4,000 00
January	1, 1920...	4		3,000 00					
"	6, "...	3½		2,000 00					
<i>Carried forward</i>				\$104,300 00					<u>\$207,550 00</u>

POOR WIDOWS' FUND.

This is a donation made by MRS. JOANNA BROOKER and others to the Selectmen of Boston for the time being.
The income from this fund is paid over in equal proportions to the Aldermen of this city, and they distribute the same, at their discretion,

for the relief of POOR WIDOWS AND SICK PEOPLE. Invested in certificates of indebtedness of the City of Boston, maturing and bearing interest as follows:

One due October 1, 1917, interest at four per cent per annum,	\$1,500 00
One due January 1, 1945, interest at three and one-half per cent per annum	1,700 00
	<u>\$3,200 00</u>

PUBLIC LIBRARY FUNDS.

ARTZ FUND.—Donation from VICTORINE THOMAS ARTZ, of Chicago, of \$10,000, the income of this sum to be employed in the purchase of valuable rare editions of the writings, either in verse or prose, of American and of foreign authors. These books are to be known as the “Longfellow Memorial Collection.”

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1917, interest at four per cent per annum, \$10,000 00

BATES FUND.—This is a donation made by JOSHUA BATES, of London, in March, 1853.

“The income only of this fund is to be used each year and every year, expended in the purchase of such books of permanent value and authority as may be found most needful and most useful.”

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1913, interest at four per cent per annum . \$50,000 00

BIGELOW FUND.—This is a donation made by JOHN P. BIGELOW, in August, 1850, when Mayor of the city.

The income from this fund is to be appropriated for the purchase of books for the increase of the library.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1913, interest at four per cent per annum . \$1,000 00

ROBERT CHARLES BILLINGS FUND.—Received April 18, 1903, from the executors of the estate of the late ROBERT CHARLES BILLINGS, through the Trustees of the Public Library, \$100,000. When the money was paid to the trustees the executors defined the purposes for which it was to be paid in the following language: “This sum is to constitute a permanent fund for said library to be called the Robert Charles Billings Fund, the income only to be used for the purposes of the purchase of books for said library.”

Invested in certificates of indebtedness of the City of Boston, maturing and bearing interest as follows:

One due April 1, 1923, three and one-half per cent per annum	\$50,000 00
One due April 1, 1923, three and one-half per cent per annum	35,000 00
One due April 1, 1923, three and one-half per cent per annum	15,000 00
	<u>\$100,000 00</u>

BOWDITCH FUND.—This is the bequest of J. INGERSOLL BOWDITCH, of Boston, of \$10,000, to the Boston Public Library, the income of which is to be expended for the purchase of books of permanent value and authority in mathematics and astronomy.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1920, interest at three and one-half per
cent per annum \$10,000 00

BRADLEE FUND.—Bequest of the late REV. CALEB DAVIS BRADLEE
for the Boston Public Library.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1918, interest at three and one-half per
cent per annum \$1,000 00

JOSEPH H. CENTER FUND.—Under the terms of the will of the late
JOSEPH H. CENTER, the corporation of the Trustees of the Public Library
of the City of Boston became residuary legatee and devisee under the
will of the late Joseph H. Center. By vote of the trustees, December
8, 1905, the sum of \$14,516.13, received by said corporation as residuary
legatee and devisee, and all further net income from, and receipts from
the sale of, the real estate given to the corporation under said will, be set
apart as a permanent fund, entitled the Joseph H. Center Fund, the
income to be at all times applied to the purchase of books and other
additions to the library. Received by City Treasurer from Trustees of the
Public Library, December 9, 1905, \$14,538.25; March 10, 1906, \$2,500;
December 11, 1906, \$6,312.30, making a total of \$23,350.55.

Invested in certificates of indebtedness of City of Boston, maturing and
bearing interest as follows:

One due January 1, 1927, three and one-half per cent per annum	\$6,200 00
One due January 1, 1936, three and one-half per cent per annum	14,000 00
One due June 1, 1936, three and one-half per cent per annum	3,000 00
Cash in City Treasury	150 55
	<u>\$23,350 55</u>

HENRY SARGENT CODMAN MEMORIAL FUND.—Donation from friends
of the late HENRY SARGENT CODMAN, of Brookline, to be utilized in pur-
chase of books upon landscape gardening, said donation to be known as
the "Henry Sargent Codman Memorial Fund."

Invested in one certificate of indebtedness of City of Boston, due April 1, 1929, interest at three and one-half per cent per annum	\$2,800 00
Cash in City Treasury	54 41
	<u>\$2,854 41</u>

CUTTER FUND.—Bequest of the late ABRAM E. CUTTER, received April
27, 1901, from Elizabeth F. Cutter, executrix of the will of said ABRAM
E. CUTTER, through the Trustees of the Public Library, amounting to
\$4,000; said sum to be safely invested, the income therefrom to be applied
to the purchase of books, to be added to the collection bequeathed by a
former provision of said will.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1931, interest at three per cent per annum	<u>\$4,000 00</u>
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DANIEL S. FORD FUND.—Received June 25, 1900, from William A.
Munroe, Seth Mendell and Henry Hinckley, executors of the estate of
Daniel S. Ford, through Trustees of the Public Library, \$6,000, as a legacy
of the late DANIEL S. FORD to the library.

Invested in one certificate of indebtedness of City of Boston,
due July 1, 1930, interest at three per cent per annum . \$6,000 00

FRANKLIN CLUB FUND.— This is a donation made in June, 1863, by a literary association of young men in Boston, who, at the dissolution of the association, authorized its trustees, Thomas Minns, John J. French, and J. Franklin Reed, to dispose of the funds on hand in such a manner as to them should seem judicious. They elected to bestow it on the Public Library, attaching to it the following conditions: "In trust that the income, but the income only, shall, year by year, be expended in the purchase of books of permanent value, for the use of the free Public Library of the city, and, as far as practicable, of such a character as to be of special interest to young men." The trustees expressed a preference for books relative to government and political economy.

Invested in one certificate of indebtedness of City of Boston,
due January 31, 1914, interest at four per cent per
annum \$1,000 00

GREEN FUND.— Donations of DR. SAMUEL A. GREEN, formerly Mayor of the city, of \$2,000, the income of which is to be expended for the purchase of books relating to American History. Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

One due April 1, 1914, four per cent per annum	\$500 00
One due April 1, 1928, four per cent per annum	1,000 00
One due October 1, 1930, three per cent per annum	500 00
	<u>\$2,000 00</u>

CHARLOTTE HARRIS FUND.— Bequest of CHARLOTTE HARRIS, of Boston, the object of which is stated in the following extract from her will:

"I give to the Charlestown Public Library, \$10,000, to be invested on interest, which interest is to be applied to the purchase of books published before 1850. I also give to said Public Library my own private library, and the portrait of my grandfather, Richard Devens." Bequest accepted by City Council July 31, 1877.

Invested in one certificate of indebtedness of City of Boston,
due October 1, 1917, interest at four per cent per annum . \$10,000 00

THOMAS B. HARRIS FUND.— Bequest of THOMAS B. HARRIS, of Charlestown, for the benefit of the Charlestown Public Library.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1914, interest at four per cent per annum . \$1,000 00

ABBOTT LAWRENCE FUND.— This is the bequest of ABBOTT LAWRENCE, of Boston.

Invested in one certificate of indebtedness of City of Boston,
due July 1, 1935, interest at three and one-half per cent
per annum \$10,000 00

The interest on this fund is to be appropriated exclusively for the purchase for the library of books having a permanent value.

EDWARD LAWRENCE FUND.— This is the bequest of EDWARD LAWRENCE, of Charlestown. The following clause from his will explains its purpose:

"To hold and apply the income, and so much of the principal as they may choose, to the purchase of special books of reference to be kept and used only at the Charlestown Branch of said Public Library."

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1916, interest at four per cent per annum . \$500 00

MRS. JOHN A. LEWIS FUND.—Received May 9, 1903, from the Trustees of the Public Library, \$5,000, in payment of a bequest to the Public Library of the City of Boston under the will of Elizabeth Lewis, to be invested and credited to the trust fund of the Public Library of the City of Boston, and to be termed the “Mrs. John A. Lewis Fund.” The ninth clause of said will is as follows: “*Ninth.* I give and bequeath to the Boston Public Library, the sum of five thousand dollars as a fund, the income of which is to be used for the purchase of such old and rare books as shall be fitly selected to augment the collection known as the John A. Lewis Library.”

Invested in one certificate of indebtedness of City of Boston,
due October 1, 1923, interest at three and one-half per
cent per annum \$5,000 00

CHARLES G. LORING MEMORIAL FUND.—Donation from family of CHARLES GREELY LORING, deceased, the income of which is to be expended for the purchase of books for the West End Branch.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1916, interest at four per cent per annum, \$500 00

CHARLES G. MEAD FUND.—Bequest of CHARLES G. MEAD, the same to constitute a trust fund to be designated the “Charles G. Mead Trust Fund,” for the promotion of the objects of the Public Library, in such manner as the government of said library shall deem best, and so far as said government shall deem it consistent with the objects of the library, to be used for the benefit of the South Boston Branch Library.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1917, interest at the rate of four per cent
per annum \$2,500 00

O'REILLY MEMORIAL FUND.—Donation from the Papyrus Club, in memory of JOHN BOYLE O'REILLY, late a member of the club, the income to be devoted to the purchase of books for the Boston Public Library.

Invested in one certificate of indebtedness of City of Boston,
due July 1, 1917, interest at four per cent per annum . \$1,000 00

PHILLIPS FUND.—This is a donation made by JONATHAN PHILLIPS, of Boston, in April, 1853.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1913, interest at four per cent per annum . \$10,000 00

The interest of this fund is to be used exclusively for the purchase of books for the library.

Also a bequest by the same gentleman in his will dated 28th of September, 1849.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1936, interest at three and one-half per cent
per annum \$20,000 00

The interest on this amount is to be annually devoted to the maintenance of a free public library.

Mr. Phillips died on the 29th of July, 1860, at the age of 82; the latter sum was realized by the city in April, 1861.

PIERCE FUND.—This is a donation made by HENRY L. PIERCE, formerly Mayor of the city, November 29, 1873, and accepted by the City Council December 27, 1873.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1924, interest at four per cent per annum, \$5,000 00

SCHOLFIELD FUND.—Bequest of \$50,000, made by ARTHUR SCHOLFIELD, who died in New York, January 17, 1883. The will provided that upon the death of certain heirs the interest was to be used for the purchase of books of permanent value. His last heir, Joseph Scholfield, died November 18, 1889, and by his will bequeathed to the City of Boston the sum of \$11,766.67, which represents the income of said fund received by him up to the time of his death, to be added to the fund bequeathed by his brother, and which, with the interest accumulated thereon, was invested in a certificate of indebtedness of the City of Boston for \$11,800.

The fund is now invested in certificates of indebtedness of the City of Boston, bearing interest and maturing as follows:

One due October 1, 1913, four per cent per annum . . .	\$50,000 00
One due July 1, 1920, four per cent per annum . . .	11,800 00
	<u>\$61,800 00</u>

SOUTH BOSTON BRANCH LIBRARY FUND.—Donation of a citizen of South Boston, the income of which is to be expended for the benefit of the South Boston Branch Library.

Invested in one certificate of indebtedness of City of Boston, due July 1, 1919, interest at four per cent per annum . . .	<u>\$100 00</u>
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SULLIVAN FUND.—Received November 14, 1908, from Catherine A. Sullivan, Edward A. McLaughlin and Michael J. Kelley, executors under the will of Patrick F. Sullivan, through the Trustees of the Public Library, \$5,000, as a legacy to the Trustees of the Public Library, as per fifth clause of the will of said Patrick F. Sullivan. "*Fifth.* I give and bequeath to the Trustees of the Boston Public Library the sum of five thousand dollars (\$5,000), the principal or income to be expended by them for the purchase of Catholic standard books, said books to be approved by the Archbishop of the Diocese of Boston, Massachusetts, or by the President of the Trustees of Boston College in Boston, Massachusetts."

Cash in City Treasury	<u>\$5,000 00</u>
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TICKNOR FUND.—By the will of GEORGE TICKNOR, of Boston, he bequeathed to the City of Boston all his books and manuscripts in the Spanish and Portuguese languages, about four thousand volumes, and also the sum of four thousand dollars. The city is required to spend not less than one thousand dollars in every five years during the twenty-five years next succeeding (*i. e.*, the income of four thousand dollars, at the rate of five per cent per annum) in the purchase of books in the Spanish and Portuguese languages and literature. At the end of twenty-five years the income of said sum is to be expended annually in the purchase of books of permanent value, either in the Spanish or Portuguese languages, or in such other languages as may be deemed expedient to those having charge of the library. The books bequeathed or purchased are always to be freely accessible for reference or study, but are not to be loaned for use outside of the library building.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1920, interest at four per cent per annum, . . .	<u>\$4,000 00</u>
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TODD FUND.—Donation of WILLIAM C. TODD, of Atkinson, New Hampshire, to be held in trust, the income only thereof to be expended for the purchase of such current newspapers of this and other countries as the board of officers for the time being having charge of the Public Library of the City of Boston shall deem proper.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1927, interest at four per cent per annum, . . .	<u>\$50,000 00</u>
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TOWNSEND FUND.—This is a donation from William Minot and William Minot, Jr., executors of the will of MARY P. TOWNSEND, of Boston, at whose disposal she left a certain portion of her estate in trust for such charitable and public institutions as they might think meritorious. Said executors accordingly selected the Public Library of the City of Boston as one of such institutions, and attached the following conditions to the legacy: "The income only shall, in each and every year, be expended in the purchase of books for the use of the library; each of which books shall have been published in some one edition at least five years at the time it may be so purchased."

Invested in one certificate of indebtedness of City of Boston, due April 1, 1929, interest at three and one-half per cent per annum	<u>\$4,000 00</u>
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TREADWELL FUND.—By the will of DANIEL TREADWELL, of Cambridge, late Rumford Professor in Harvard College, who died February 27, 1872, he left the residue of his estate, after payment of debts, legacies, etc., in trust to his executors, to hold during the life of his wife for her benefit, and after her decease to divide the residue then remaining in the hands of the trustees, as therein provided, and convey one-fifth part thereof to the Trustees of the Public Library of the City of Boston, the income of which is to be expended by said trustees in such manner as they may deem for the best interests of the library.

Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January 1, 1916, four per cent per annum . . .	\$500 00
One due April 1, 1916, four per cent per annum . . .	2,000 00
One due October 1, 1917, four per cent per annum . . .	1,700 00
One due November 15, 1919, three and one-half per cent per annum	1,400 00
One due October 1, 1921, four per cent per annum . . .	1,000 00
One due October 1, 1923, four per cent per annum . . .	350 00
One due July 1, 1947, four per cent per annum . . .	7,000 00
	<u>\$13,950 00</u>
Cash in City Treasury	37 69
	<u>\$13,987 69</u>

NATHAN A. TUFTS FUND.—Legacy of the late NATHAN A. TUFTS, as a bequest to the Charlestown Public Library, which by vote of the Trustees of the Public Library has been set apart as a permanent fund entitled the "Nathan A. Tufts Fund," the future income thereof to be at all times applied to the purchase of books and other additions to the library to be placed in the Charlestown Branch. Received from trustees November 19, 1906, \$10,131.77. Invested in certificates of indebtedness of the City of Boston, bearing interest and maturing as follows:

One due October 1, 1926, three and one-half per cent per annum	\$9,600 00
One due December 1, 1926, three and one-half per cent per annum	400 00
	<u>\$10,000 00</u>
Cash in City Treasury	131 77
	<u>\$10,131 77</u>

TWENTIETH REGIMENT MEMORIAL FUND.—Donation of the Twentieth Regiment Association, to establish a Public Library trust fund to be

known as the "Twentieth Regiment Memorial Fund," the income of which is to be used for the purchase of books of a military and patriotic character, to be placed in alcove appropriated as a memorial of the Twentieth Regiment.

Invested in one certificate of indebtedness of City of Boston,
due October 1, 1917, interest at four per cent per annum, \$5,000 00

RECAPITULATION PUBLIC LIBRARY TRUST FUNDS.

Artz Fund	\$10,000 00
Bates Fund	50,000 00
Bigelow Fund	1,000 00
Robert Charles Billings Fund	100,000 00
Bowditch Fund	10,000 00
Bradlee Fund	1,000 00
Joseph H. Center Fund	23,350 55
Henry Sargent Codman Memorial Fund	2,854 41
Abram E. Cutter Fund	4,000 00
Daniel S. Ford Fund	6,000 00
Franklin Club Fund	1,000 00
Green Fund	2,000 00
Charlotte Harris Fund	10,000 00
Thomas B. Harris Fund	1,000 00
Abbott Lawrence Fund	10,000 00
Edward Lawrence Fund	500 00
Mrs. John A. Lewis Fund	5,000 00
Charles G. Loring Memorial Fund	500 00
Charles G. Mead Fund	2,500 00
O'Reilly Memorial Fund	1,000 00
Phillips Fund	30,000 00
Pierce Fund	5,000 00
Scholfield Fund	61,800 00
South Boston Branch Library Fund	100 00
Sullivan Fund	5,000 00
Ticknor Fund	4,000 00
Todd Fund	50,000 00
Townsend Fund	4,000 00
Treadwell Fund	13,987 69
Nathan A. Tufts Fund	10,131 77
Twentieth Regiment Memorial Fund	5,000 00
	<u>\$430,724 42</u>

GEORGE L. RANDIDGE FUND.

This is a bequest of the late GEORGE L. RANDIDGE, and received from George S. Hale and Alfred D. Foster, trustees of his estate, June 26, 1896, the income thereof to be devoted for the sole purpose of affording to the children of the poor of the city, of all religious denominations, the pleasure of one or more excursions during the months of July and August in each year. Income to be paid as designated by the Mayor.

Invested in one certificate of indebtedness of City of Boston,
due July 1, 1916, interest at four per cent per annum, \$50,000 00

SAWYER MARCELLA STREET HOME FUND.

Bequest of SAMUEL E. SAWYER for the benefit of the "Marcella Street Home for Poor and Neglected Children," on the condition that the sum be safely invested as a permanent fund, and the income only of said sum be used in such manner as will best promote the interests and prosperity of the institution. Received as follows: \$2,000, December 31,

1895; \$213.94, April 21, 1896; \$98.40, April 26, 1897, and \$77, September 14, 1901. Interest accrued on deposit, \$10.66, making a total of \$2,400. Accepted by City Council by order approved November 30, 1895. Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January 1, 1916, interest at four per cent per annum,	\$2,000 00
One due January 1, 1918, interest at three and one-half per cent per annum	300 00
One due October 1, 1923, interest at three and one-half per cent per annum	100 00
	<u>\$2,400 00</u>

SCHOOL FUNDS.

BOWDOIN DORCHESTER FUND.— Proceeds from the sale of a woodland estate in Milton, conveyed by Gov. JAMES BOWDOIN to the inhabitants of the town of Dorchester.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1920, interest at four per cent per annum,	<u>\$4,500 00</u>
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Income to be expended by the School Committee for the benefit of the public schools in that part of Boston called Dorchester.

COMINS SCHOOL LIBRARY FUND.— Donation of LINUS B. COMINS, the interest of which is to be expended upon the library of the “Comins Grammar School for Girls,” and to be held in trust by the Chairman of the School Committee, the Mayor of the city, and the President of the Common Council, who are constituted, *ex officiis*, trustees of the fund.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1929, interest at three and one-half per cent per annum	<u>\$500 00</u>
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DEVENS INFANT SCHOOL FUND.— Bequest from DAVID DEVENS, who died August 30, 1855, for the benefit of the infants’ schools in Charlestown and children who attended them. Accepted by the City of Charlestown November 10, 1856.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1915, payable to the Mayor of the city and his successors, as trustees of said legacy, interest at four per cent per annum	<u>\$1,000 00</u>
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EASTBURN FUND.— This is a bequest from JOHN H. EASTBURN, received from executors of his estate in April, 1886.

The following clause from his will explains the purpose of the bequest: “The interest to be applied to aid and assist deserving and poor scholars to finish their education, by pecuniary assistance, in the Normal School for Females.”

Invested in one certificate of indebtedness of City of Boston, due April 1, 1916, interest at four per cent per annum,	<u>\$10,000 00</u>
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Income unexpended, one certificate of indebtedness of City of Boston, due June 1, 1923, interest at three and one-half per cent per annum	<u>\$1,000 00</u>
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FRANKLIN MEDAL FUND.— This is a legacy by DR. BENJAMIN FRANKLIN in 1791, the interest on which, since 1792, has been invested in silver medals, which are now distributed at the annual examinations among the most deserving boys in the ENGLISH HIGH AND LATIN SCHOOLS.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1930, interest at three and one-half per cent per annum	<u>\$1,000 00</u>
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GIBSON FUND.—This is the bequest of CHRISTOPHER GIBSON, who provided by will, about 1674, that after the payment of legacies and debts his executors should “purchase some estate for the promotion of learning in the Town of Dorchester.” The surviving executor, Daniel Preston, purchased for £104 twenty-six acres of land at Smelt Brook, and deeded the same, February 6, 1693, to Enoch Wiswell, Samuel Robinson, John Tolman, James Bird and Increase Sumner as trustees, and to their successors and assigns, for the “use and purpose, benefit and behoof, of the schools of learning in the Town of Dorchester.” Sales have been made from time to time, and a part still remains unsold. The proceeds have been invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due April 1, 1915, four per cent per annum	\$2,500 00
One due July 1, 1917, three and one-half per cent per annum	37,500 00
One due October 1, 1920, four per cent per annum	2,000 00
One due October 1, 1920, four per cent per annum	1,000 00
One due January 1, 1921, three per cent per annum	2,100 00
One due October 1, 1922, three and one-half per cent per annum	1,000 00
One due October 1, 1923, four per cent per annum	425 00
One due April 1, 1928, four per cent per annum	6,000 00
One due January 1, 1930, three and one-half per cent per annum	14,200 00
One due July 1, 1930, three per cent per annum	600 00
One due January 1, 1931, three per cent per annum	5,000 00
One due October 1, 1935, three and one-half per cent per annum	1,000 00
	<u>\$73,325 00</u>
Cash in City Treasury	15 43
	<u>\$73,340 43</u>

LATIN SCHOOL PRIZE FUND.—This is a donation from a number of gentlemen in Boston, in the year 1819, the interest of which is invested in prizes, which are annually distributed among the most deserving scholars in the PUBLIC LATIN SCHOOL.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1926, interest at three and one-half per cent per annum	<u>\$1,050 00</u>
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LAWRENCE HIGH SCHOOL FUND.—This is a donation made by ABBOTT LAWRENCE, of Boston, in the year 1844, the interest of which is payable annually to the subcommittee on the ENGLISH HIGH SCHOOL, for the time being; and is by them distributed in prizes for the best performance in various branches of literature and science in that institution; and in such other rewards to the scholars in the school as that committee shall recommend.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1926, interest at three and one-half per cent per annum	<u>\$2,000 00</u>
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LAWRENCE LATIN SCHOOL FUND.—This is a donation made by ABBOTT LAWRENCE, in the year 1845, the interest of which is payable annually

to the "Chairman of the subcommittee of PUBLIC LATIN SCHOOL, for the time being," and is distributed in prizes for the general encouragement of the scholars in such a way as the subcommittee on that school shall consider advisable.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1926, interest at three and one-half per cent per annum	<u>\$2,000 00</u>
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MRS. JOHN A. LEWIS FUND.—May 12, 1903, received of John Ritchie, executor under the will of Elizabeth Lewis, \$1,000. This is a legacy of the late Elizabeth Lewis, to be invested and reinvested as a permanent fund. The income from said fund to be used for the benefit of the Horace Mann School for the Deaf.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1923, bearing interest at the rate of three and one-half per cent per annum	<u>\$1,000 00</u>
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MILMORE BRIMMER SCHOOL FUND.—Bequest of MARTIN MILMORE, the income from which to aid in clothing the poor children of the Brimmer School.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1914, interest at four per cent per annum	<u>\$500 00</u>
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NORCROSS SCHOOL LIBRARY FUND.—Donation and bequest of OTIS NORCROSS, formerly Mayor of Boston. The income from this fund is to be paid to the master of the "Norcross School," to be expended in books for a library for the first class of said school. Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

One due October 1, 1917, four per cent per annum	\$500 00
One due October 1, 1922, three and one-half per cent per annum	500 00
	<u>\$1,000 00</u>

SAWYER HORACE MANN SCHOOL FUND.—Bequest of SAMUEL E. SAWYER for the benefit of the "Horace Mann School for Deaf and Dumb," on condition that the sum be safely invested as a permanent fund, and the income only of said sum to be used in such manner as will best promote the interests and prosperity of the institutions. Accepted by City Council by order approved November 30, 1895. Received \$2,000 December 31, 1895; \$213.94 April 21, 1896; \$98.40 April 26, 1897, and \$77 September 14, 1901. Interest accrued on deposit, \$10.66, making a total of \$2,400. Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January 1, 1916, interest at four per cent per annum, ...	\$2,000 00
One due January 1, 1918, interest at three and one-half per cent per annum	300 00
One due October 1, 1923, interest at three and one-half per cent per annum	100 00
	<u>\$2,400 00</u>

SHERWIN SCHOOL GRADUATES FUND.—Amounts contributed by graduates of the Sherwin School, and by others interested in the school, to be expended for the benefit of said school. By order of the City Council, approved March 16, 1906, the City Treasurer was authorized to receive

from Francis A. Morse, late Master of the Sherwin School, the sum of one hundred dollars, and such further sums as may be contributed by graduates and others interested in said school, and to invest in securities of the City of Boston or otherwise, and pay the income to the order of the then Master of said school, to be expended by him for the benefit of said school, said fund to be called the Sherwin School Graduates Fund. Received March 17, 1906, from Francis A. Morse, contributed by former graduates, \$100; July 7, 1906, \$25 from Edward P. Shute, Principal Sherwin School, contributed by graduating class of 1906; July 3, 1907, \$25 from Edward P. Shute, Principal Sherwin School, contributed by graduating class of 1907; June 26, 1908, from Edward P. Shute, Principal Sherwin School, \$32, contributed by graduating class of 1908.

Invested in one certificate of indebtedness of City of Boston, due June 1, 1926, interest at three and one-half per cent per annum	\$100 00
Cash in City Treasury	82 00
	\$182 00

SMITH FUND.—A legacy of ABIEL SMITH, of Boston, who died in 1817, to the SELECTMEN OF THE TOWN OF BOSTON for the time being.

The income from this fund is appropriated towards the expense of "the Free Instruction of COLORED CHILDREN in Reading, Writing and Arithmetic." Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due April 1, 1915, four per cent per annum	\$4,400 00
One due July 1, 1919, four per cent per annum	200 00
One due April 1, 1930, three and one-half per cent per annum, ...	4,000 00
	\$8,600 00

STOUGHTON FUND.—This is a bequest of Gov. WILLIAM STOUGHTON, who died at Dorchester July 7, 1701, and which gave to the schools of Dorchester one hundred and fifty pounds, "for the advancement of a salary of a school master."

The terms of this bequest were complied with by the authorities of the Town of Dorchester. This fund was received from the treasurer of the Town of Dorchester by the terms of the act of annexation of said town to Boston, and stands as follows:

Invested in one certificate of indebtedness of City of Boston, due April 1, 1915, interest at four per cent per annum	\$5,300 00

The income of the fund is paid to the City Treasurer and credited annually to salaries of school instructors.

TEACHERS' WATERSTON FUND.—Bequest of the late REV. ROBERT C. WATERSTON, of Boston, "the same to be safely invested, and the income thereof to be appropriated as the head masters of the High and Grammar schools shall deem best—either for lectures to the teachers upon Natural History in any of its various departments—or from time to time according to their judgment." The fund to be known and designated as the "Waterston Fund," or the "Teachers' Waterston Fund." Received from Robert W. Lord, trustee under the will of said Robert C. Waterston, through School Committee, August 17, 1900, \$4,717.33. Interest accrued on deposit, \$82.67, making a total of \$4,800.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1932, interest at three per cent per annum, ...	\$4,800 00

WEBB FRANKLIN SCHOOL FUND.—This is a legacy made in the year 1828, by RUFUS WEBB, formerly writing master in one of the public schools.

The income from this fund is applied to the purchase of books, etc., for the use of indigent scholars in the writing department of the Franklin School.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1945, interest at three and one-half per cent per annum	<u>\$1,000 00</u>
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Income unexpended, one certificate of indebtedness of City of Boston, due October 1, 1922. interest at three and one- half per cent per annum	<u>\$1,000 00</u>
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RECAPITULATION OF SCHOOL TRUST FUNDS.

Bowdoin Dorchester Fund	\$4,500 00
Comins School Library Fund	500 00
Devens Infant School Fund	1,000 00
Eastburn Fund	10,000 00
Eastburn Fund, unexpended income invested	1,000 00
Franklin Medal Fund	1,000 00
Gibson Fund	73,340 43
Latin School Prize Fund	1,050 00
Lawrence High School Fund	2,000 00
Lawrence Latin School Fund	2,000 00
Mrs. John A. Lewis Horace Mann School Fund	1,000 00
Milmore Brimmer School Fund	500 00
Norcross School Library Fund	1,000 00
Sawyer Horace Mann School Fund	2,400 00
Sherwin School Graduates Fund	182 00
Smith Fund	8,600 00
Stoughton Fund	5,300 00
Teachers' Waterston Fund	4,800 00
Webb Franklin School Fund	1,000 00
Webb Franklin School Fund, unexpended income invested, ...	1,000 00
	<u>\$122,172 43</u>

GEORGE L. THORNDIKE FUND.

Bequest of the late GEORGE L. THORNDIKE of \$10,000 to the City of Boston in trust, the income from the same to be used to purchase coal to be distributed to deserving widowed women of East Boston. Accepted by order of City Council, approved April 17, 1907. By order of the City Council, approved December 19, 1907, the City Treasurer is authorized to pay over to the Overseers of the Poor the annual income received from the investment of the fund, and the Overseers of the Poor are authorized to expend said income in accordance with the provisions of the will. Received April 30, 1907, from Albert E. Clary and William B. Pigeon, executors of estate of George L. Thorndike, \$10,000 as above.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1937, interest at four per cent per annum, ...	<u>\$10,000 00</u>
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PUBLIC SCHOOL TEACHERS' RETIREMENT FUND.

This fund has been created in accordance with the provisions of chapter 237 of the Acts of 1900.

The fund is for the purpose of providing annuities to teachers who have retired from the service of the City of Boston after having taught a certain length of time in the day schools of the city, and who have contributed a certain sum to the fund.

Eighteen dollars per year is deducted by the City Treasurer from the salaries of all teachers who entered the service of the city after the passage

of the Act of 1900, and also from the salaries of such other teachers as have voluntarily elected to come within the provisions of the act.

On January 31, 1909, two thousand one hundred and eighty-five were contributing to the fund at the rate of \$18 per year.

On January 31, 1909, one hundred and forty retired teachers were receiving annuities of \$15 per month, each having contributed \$540 to the fund.

On January 31, 1909, the fund in the hands of the City Treasurer, custodian, consisted of the following:

Certificates of indebtedness of the City of Boston, maturing and bearing interest as follows:

DATE OF MATURITY.	Rate of Interest, Per cent.	Amount.	DATE OF MATURITY.	Rate of Interest, Per cent.	Amount.
January 1, 1913....	3½	\$13,000 00	<i>Brought forward</i> ..		\$175,300 00
October 1, 1922....	3½	10,000 00	October 1, 1935..	3½	4,000 00
" " "....	3½	5,200 00	" " "....	3½	4,500 00
June 1, 1923....	3½	10,000 00	December 1, "....	3½	5,000 00
" " "....	3½	9,000 00	January 1, 1936..	3½	6,000 00
January 1, 1924....	3½	12,400 00	June 1, "....	3½	5,000 00
" " "....	3½	5,000 00	April 1, 1937..	4	150 00
" " "....	3½	7,000 00	October 1, 1938..	4	7,000 00
" " "....	3½	4,000 00	January 1, 1945..	3½	4,000 00
June 1, 1926....	3½	2,000 00	" " "....	3½	2,100 00
October 1, "....	3½	9,000 00	April 1, "....	3½	2,000 00
December 1, "....	3½	3,000 00	" " "....	3½	5,000 00
January 1, 1927....	3½	5,000 00	" 1, 1946..	3½	4,250 00
July 1, "....	4	3,000 00	" 1, 1947..	4	5,000 00
April 1, 1928....	4	5,900 00	" " "....	4	6,850 00
June 1, "....	4	6,000 00	July 1, "....	4	2,000 00
" " "....	4	6,000 00	December 1, "....	4	3,000 00
April 1, 1932....	3	12,000 00	October 1, "....	4	5,000 00
July 1, "....	3½	5,000 00	9 \$1,000 West End		
" " "....	3½	5,000 00	Street Railway		
October 1, "....	3½	20,000 00	Bonds, due August		
" " "....	3½	6,800 00	1, 1932	4	9,000 00
January 1, 1935.....	3½	6,000 00	Deposit in American		\$255,150 00
July 1, "....	3½	5,000 00	Trust Company ..		9,259 74
<i>Carried forward</i> ..		\$175,300 00			<u>\$264,409 74</u>

Statement of Trust Funds in Custody of City Treasurer.

Babcock Music	\$3,110 12
Billings Westerly Cemetery	5,000 00
City Hospital	85,392 11
Dorchester North Burial Ground	3,306 00
Dorchester South Cemetery	698 00
Evergreen Cemetery	14,836 31
Fitzgerald Firemen's Gold Medal	1,000 00
Thomas Fitzgerald	1,000 00
Foss Seventeenth of June and Flag	4,000 00
John Foster	468 28
Franklin, First Part	64,475 70
" Second Part	185,065 07
Franklin Union, Andrew Carnegie Donation	471,484 95
Charles E. French Funds:	
Burial Grounds, Care	10,000 00
Old State House, Repair	3,000 00
Boston Common, Tree	5,000 00

Carried forward \$857,836 54

Brought forward	\$857,836 54
George B. Hyde	4,555 95
Ellen C. Johnson Bequest	3,931 62
John Larkin	200 00
Mt. Hope Cemetery	102,293 07
Phillips Street	20,000 00
Police Charitable	207,550 00
Poor Widows'	3,200 00
Public Library	430,724 42
George L. Randidge	50,000 00
Sawyer Marcella Street Home	2,400 00
School	122,172 43
George L. Thorndike	10,000 00
Public School Teachers' Retirement	264,409 74
Total	<u>\$2,079,273 77</u>

INCREASE AND DECREASE OF TRUST FUNDS FOR FINANCIAL
YEAR 1908-1909.

Increase:

Interest on Bank Deposits	\$2,416 33
Interest on Investments	75,479 85
Revenue	61,337 14
Bequests and Contributions	5,032 00
Accumulative Investments	7,541 62
Appreciation of Investments	1,943 00
	<u>\$153,749 94</u>

Decrease:

City Treasurer, General and Special Pay- ments	\$338,328 52
City Collector, Income on Funds	20,009 23
Income on Funds, Special	19,364 76
Revenue	25,450 75
Depreciation of Investments	20,280 70
Interest on Investments Purchased	164 00
Premium on Investments Purchased	67 50

	<u>\$423,665 46</u>	
Decrease of Funds for Year		269,915 52
	<u>\$423,665 46</u>	<u>\$423,665 46</u>

**Balance Sheet, January 31, 1909, as per Preceding Statement,
as follows:**

Amount of Funds invested in various securities . . . \$2,022,554 67

Amount of Funds, Cash deposited in Banks and in the
custody of the City Treasurer:

Merchants National Bank, Franklin Union, Andrew Carnegie Donation . . .	\$9,439 68
Second National Bank, Franklin Fund, First Part . . .	17,475 70
Commonwealth Trust Company, Burnham Hospital Building Fund . . .	9,192 11
Mechanics Trust Company, John Foster Fund . . .	468 28
American Trust Company, Public School Teachers' Retirement Fund . . .	9,259 74
	\$45,835 51

Sundry Trust Fund Balances:

City Hospital, Wyman Fund . .	\$150 00
Dorchester North Burial Ground, .	56 00
Dorchester South Cemetery . .	48 00
Evergreen Cemetery . . .	86 31

Franklin Union, Andrew Carnegie
Donation, Income:

Cash Vouchers, Advances . .	1,566 79
George B. Hyde . . .	2,555 95
Ellen C. Johnson Bequest . .	931 62
Mt. Hope Cemetery . . .	17 07

Public Library:

Joseph H. Center . . .	150 55
Henry Sargent Codman . .	54 41
Patrick F. Sullivan . . .	5,000 00
Treadwell . . .	37 69
Nathan A. Tufts . . .	131 77

School:

Gibson . . .	15 43
Sherwin Graduates . . .	82 00

10,883 59

Cash in Custody of City Treasurer . . . 56,719 10

Total amount of Funds January 31, 1909 . . . \$2,079,273 77



ANNUAL REPORT
OF THE
VESSELS AND BALLAST DEPARTMENT
FROM DECEMBER 19, 1907, TO JANUARY 31, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,— In compliance with the ordinance relative to the Vessels and Ballast Department I herewith report that for the year ending January 31, 1909, we have weighed and inspected seventy-one (71) vessels and the cargoes delivered by them amounted to eleven thousand one hundred and sixty-nine (11,169) tons.

The fees amounted to	.	.	.	.	\$565 55
Expenses of office for year	.	.	.	.	80 60
Net income	.	.	.	.	\$484 95

The net income has been divided by the incumbents, as provided by law.

EDWARD HUGHES,
Chief Weigher and Inspector.



FOURTEENTH ANNUAL REPORT
OF THE
WATER DEPARTMENT
FOR THE YEAR 1908-1909.

OFFICE OF THE WATER COMMISSIONER,
CITY HALL, BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,—I submit herewith the fourteenth annual report of the doings of the Water Department covering the year ending January 31, 1909. This report has been prepared, as far as possible, in accordance with the suggestions of the Boston Finance Commission.

The receipts and disbursements of the department for the year were as follows:

Total receipts from all sources	\$2,695,761 00
Total expenditures for all purposes	<u>\$2,695,761 00</u>

TOTAL RECEIPTS OF THE YEAR BY SOURCES.

Sales of water	\$2,626,564 59
Service, elevator, fire and motor pipes and repairs, labor, materials, etc.	34,985 84
Sale of old materials	5,652 54
Fees for summonses	2,924 40
Sale of merchandise (mostly to other departments)	2,649 01
Shutting off and letting on water on account of repairs	1,884 19
Shutting off and letting on water on account of nonpayment of bills	1,794 00
Use of West Roxbury pumping plant	786 36
Carried forward	<u>\$2,677,240 93</u>

<i>Brought forward</i>	\$2,677,240 93
Board of City Engineer's horse	624 00
Difference on cost of laying main pipe	475 50
Car tickets redeemed	359 45
Interest on deposits	228 14
Miscellaneous	145 88
	\$2,679,073 90
Transfer by City Auditor to meet deficiency	16,687 10
	<u>\$2,695,761 00</u>

EXPENDITURES.

Current expenses and extensions	\$729,677 14
Metropolitan water assessment	1,789,315 84
Interest on funded debt	175,010 17
Refunded water rates	1,757 85
	<u>\$2,695,761 00</u>

For detailed account of expenditures, condition of water debt, etc., see statements annexed.

Reports of work performed in the Income and Distribution Divisions and the Engineering Department will be found in the appendices annexed hereto.

Respectfully,

WILLIAM E. HANNAN,
Water Commissioner.

Details of expenditures under the appropriation for current expenses for the fiscal year ending January 31, 1909. (From revenue and transfer.)

Salaries and wages:

William J. Welch, commissioner to April 27, 1908, inclusive	\$1,625 00
William E. Hannan, commissioner from April 28, 1908, inclusive	3,375 00
	\$5,000 00

Assistant Commissioners:

Isaac Rosnosky	3,000 00
Joseph J. Norton, to April 1, 1908	750 00
James P. Lennon, to April 1, 1908	750 00
John J. Feneno, secretary, to January 15, 1908 (balance due)	104 17
Walter E. Swan, chief clerk	3,000 00
Employees	467,819 42
	\$480,423 59
<i>Carried forward</i>	
	\$480,423 59

WATER DEPARTMENT.

3

<i>Brought forward</i>	\$480,423 59	
Water pipes and other castings	99,218 94	
Blasting and excavating pipe trenches and laying water pipes	40,854 50	
Stable: -		
Board, feed, etc.	\$10,437 67	
Vehicles and repairs	2,888 46	
Horseshoeing	2,505 81	
Horses, purchase of	2,090 00	
Harnesses and repairs, etc.	1,229 05	
Veterinary services, etc.	705 62	
		19,856 61
Repairs and alterations of buildings, repairs of streets and structures		13,437 24
Lead and lead pipe		12,654 05
Meters:		
New meters	\$9,964 00	
Repairs and extra parts	1,889 12	
		11,853 12
Tools and machinery and repairs of same, iron, steel, hardware and small supplies		10,593 99
Lumber		8,843 20
Printing		3,560 62
Fuel		3,420 46
Traveling expenses and transportation of employees		3,382 20
Salt		3,017 85
Gravel and crushed stone		2,509 46
Teaming, freights and expressage		2,238 58
Telephones		2,235 53
Stationery, postage, etc.		1,983 39
Automobile	\$1,650 00	
Automobile repairs	264 52	
		1,914 52
Cement, lime and sand		1,219 95
Rents		641 00
Oils		552 13
Furniture		500 98
Gas		357 64
Taxes		327 75
Bricks		313 00
Professional and expert services		244 00
Waterproof clothing		230 57
Salt hay		175 44
Advertising		158 89
Drain pipe		77 68
Premiums on surety bonds		50 00
Removing trees		40 00
Recording papers		30 50
Decorations, "Old Home Week"		20 00
Displacement of tide water, assessment		21 38
Inspection of boilers		5 00
Copy of records		1 00
Ice for freezing water pipes		50
		\$726,965 26
Damages		2,711 88
		<u>\$729,677 14</u>

Comparative Table of Receipts and Expenditures.

Receipts.

	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
Sales of water.....	\$2,388,428 81	\$2,400,764 31	\$2,471,726 19	\$2,558,614 34	\$2,626,564)
Other receipts.....	56,794 04	58,315 50	80,118 91	67,975 43	52,509
	\$2,445,222 85	\$2,459,079 81	\$2,551,845 10	\$2,626,589 77	\$2,679,073)
Loan, extension of mains.....		330,000 00	300,000 00		
Credited from taxes.....	160,699 98	200,000 00	120,000 00		
Transfers by City Auditor.....				35,878 85	16,687
	\$2,605,922 83	\$2,989,079 81	\$2,971,845 10	\$2,662,468 62	\$2,695,761)
Balance, beginning of year.....	*\$284,512 15	*\$23,727 34	{ *\$17,540 97 †9,460 67 \$27,001 64	{ *\$16,365 90 †54,739 39 \$71,105 29	
Balance, end of year.....	*\$23,727 34	{ *\$17,540 97 †9,460 67 \$27,001 64	{ *\$16,365 90 †54,739 39 \$71,105 29		

Expenditures.

	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.
Current expenses.....	\$543,747 20	\$541,375 59	\$544,769 54	\$646,191 07	‡\$729,677 1
Metropolitan water assessment.	1,700,274 07	1,758,635 00	1,822,556 33	1,726,588 68	1,789,315 8
Interest.....	360,813 00	348,188 36	257,764 85	178,217 66	175,010 1
Refunded water rates..	1,086 56	1,420 19	1,475 66	1,210 60	1,757 8
Extension of mains:					
From loans.....	260,784 81	336,186 37	301,175 07	16,365 90	
From appropriation from revenue.....				165,000 00	
	\$2,866,707 64	\$2,985,805 51	\$2,927,741 45	\$2,733,573 91	\$2,695,761 00

* Loan.

† Taxes.

‡ This amount was expended for current expenses and extensions, there being one appropriation only.

There was also expended by the Water Department, under an appropriation of \$5,000, from the Reserve Fund, for ice for drinking fountains (order of City Council, approved May 21, 1908):

Ice	\$3,503 77
Advertising	31 50
	<u>\$3,535 27</u>

COST OF CONSTRUCTION AND CONDITION OF THE WATER DEBT.

The outstanding water loans February 1, 1908, were	\$4,531,500 00
The outstanding water loans February 1, 1909, were	4,249,500 00
	<u>\$282,000 00</u>
Decrease during the year	
The Water Sinking Fund February 1, 1908, was	\$3,794,779 37
The Water Sinking Fund February 1, 1909, was	3,637,956 71
	<u>\$156,822 66</u>
Decrease during the year	
Net water debt February 1, 1908	\$736,720 63
Net water debt February 1, 1909	611,543 29
	<u>\$125,177 34</u>
Decrease during the year	
Stock on hand February 1, 1908	\$165,453 29
Stock on hand February 1, 1909	129,578 98
	<u>\$35,874 31</u>
Decrease during the year	

The following statement relating to the cost of the water-works has been prepared by the chief clerk, Mr. W. E. Swan, and is probably as correct an account as it is possible to obtain at the present time.

While the cost of the plant now owned by the city represents an amount of \$15,390,574.32, it is a question whether this amount does not considerably exceed the actual value of the works.

COST OF WORKS.

Cochituate supply	\$1,715,950 73
Sudbury supply	9,267,367 04
Mystic supply	1,806,316 72
Distribution system	15,196,885 49
	<u>\$27,986,519 98</u>
Total cost, January 1, 1898, exclusive of state takings, ...	\$27,986,519 98
Cost of portion taken by the state	14,717,009 30
	<u>\$13,269,510 68</u>
Cost of portion remaining	

Cost of portion taken by the state	\$14,717,009 30
Total payments by state	13,685,766 84
Excess of cost over amount paid	<u>\$1,031,242 46</u>

Cost in detail of portion of original works, exclusive of state taking:

Brookline Reservoir	\$200,077 21
Beacon Hill Reservoir	363,533 21
South Boston Reservoir	90,908 10
Jamaica Pond Aqueduct	88,417 20
East Boston Reservoir	66,103 09
Parker Hill Reservoir	205,793 81
Fisher Hill Reservoir	191,135 35
Roxbury high service	103,829 53
Brighton high service	7,745 00
East Boston high service	30,208 12
West Roxbury high service	22,346 56
Pipe yards and buildings	94,832 16
Engineering expenses	57,873 58
Distribution	10,871,844 18
Cochituate works	\$12,394,647 10
Mystic works (distribution)	874,863 58
Cost, January 31, 1898	<u>\$13,269,510 68</u>

Additions to cost on account of extension of mains, etc. (eleven years to January 31, 1909), viz.:

Year ending January 31, 1899	\$411,910 26
“ “ 31, 1900	446,120 35
“ “ 31, 1901	364,604 06
“ “ 31, 1902	259,228 99
“ “ 31, 1903	125,705 99
“ “ 31, 1904	117,501 25
“ “ 31, 1905	221,595 49
“ “ 31, 1906	313,465 41
“ “ 31, 1907	293,734 68
“ “ 31, 1908	220,239 57
“ “ 31, 1909	182,602 70
	<u>2,956,708 75</u>
	<u>\$16,226,219 43</u>
Cost represented on waterworks ledger, January 31, 1909, ...	\$17,257,461 89
Cost represented by above statement on same date	16,226,219 43
Excess of cost represented over amount paid by state, ...	<u>\$1,031,242 46</u>

The following is a statement of the cost of the existing works on January 31, 1909:

East Boston Reservoir	\$66,103 09
Parker Hill Reservoir	205,793 81
Fisher Hill Reservoir	191,135 35
East Boston high service	24,173 26
West Roxbury high service	22,346 56
Pipe yards and buildings	94,832 16
Engineering expenses	57,873 58
Distribution	14,728,316 51
Total	<u>\$15,390,574 32</u>

In making up this statement, the difference between the cost to the city of the portion taken by the state and the total amount paid by the state for said portion (\$1,031,242.46) has been eliminated, and the items Brookline, Beacon Hill and South Boston reservoirs and the Brighton high service works have also been eliminated as they no longer exist in the waterworks plant. The two former reservoirs were taken from the waterworks assets without compensation to the department. A portion of the South Boston Reservoir property was taken for schoolhouse purposes, the department being compensated for land taken, and the remainder of the property being turned over to the Public Grounds Department. The standpipe in Roxbury, which formed a part of the Roxbury high service, was also transferred to the Public Grounds Department without reimbursement, and the Roxbury pumping works have long since been abandoned; consequently only the value of the pipes formerly connected with the high service works which are in existence at the present time has been considered, and the amount of \$23,829.53 of the original item of \$103,829.53 has been lumped with distribution. Of the original cost of the East Boston high service (\$30,208.12) the sum of \$6,034.86, representing the cost of the old pumps, boilers and foundations, has been deducted, leaving the cost of the remaining portion of these works at \$24,173.26. The Jamaica Pond Aqueduct works, which cost the city \$88,417.20, have also long since been out of existence. The value of the mains now remaining in service is placed at \$4,900, which amount has also been carried into the distribution item. The construction account on the books of the department has been modified to conform to the above revised account and henceforth such additions or extensions as are made from time to time will be added to the cost of the plant.

The outstanding water loans on February 1, 1909, were as follows:

Loans.					Date of Maturity.					Amount.	
4	per	cent	loan, due	July,	1909	.	.	.	.	.	\$64,000 00
4½	"	"	"	October,	1909	.	.	.	.	.	120,000 00
4	"	"	"	April,	1910	.	.	.	.	.	253,000 00
4	"	"	"	April,	1912	.	.	.	.	.	324,000 00
4	"	"	"	October,	1913	.	.	.	.	.	50,000 00
4	"	"	"	January,	1914	.	.	.	.	.	459,000 00
4	"	"	"	April,	1914	.	.	.	.	.	9,500 00
4	"	"	"	October,	1914	.	.	.	.	.	10,000 00
4	"	"	"	April,	1915	.	.	.	.	.	32,700 00
4	"	"	"	October,	1915	.	.	.	.	.	17,000 00
4	"	"	"	January,	1916	.	.	.	.	.	8,000 00
4	"	"	"	April,	1916	.	.	.	.	.	18,500 00
<i>Carried forward</i>											\$1,365,700 00

Loans.				Date of Maturity.		Amount	
<i>Brought forward</i>						\$1,365,700	00
4	per	cent	loan, due	October,	1916		11,300 00
4	"	"	"	January,	1917		8,000 00
3½	"	"	"	April,	1917		275,000 00
4	"	"	"	April,	1917		6,000 00
4	"	"	"	October,	1917		157,700 00
4	"	"	"	January,	1918		13,000 00
4	"	"	"	April,	1918		300 00
3½	"	"	"	July,	1918		100,000 00
4	"	"	"	October,	1918		95,000 00
4	"	"	"	April,	1919		200,000 00
3½	"	"	"	October,	1919		2,000 00
4	"	"	"	October,	1919		189,000 00
3½	"	"	"	November,	1919		106,000 00
3½	"	"	"	January,	1920		70,000 00
4	"	"	"	October,	1920		172,500 00
4	"	"	"	April,	1921		100,000 00
4	"	"	"	October,	1921		140,500 00
4	"	"	"	January,	1922		80,000 00
4	"	"	"	April,	1922		75,000 00
4	"	"	"	October,	1922		193,000 00
4	"	"	"	October,	1923		18,275 00
4	"	"	"	October,	1924		436,225 00
3½	"	"	"	October,	1927		25,000 00
3½	"	"	"	July,	1929		410,000 00
Total						\$4,249,500	00

SUMMARY.							
3½	per	cent	loans			\$988,000	00
4	"	"	"			3,141,500	00
4½	"	"	"			120,000	00
Total						\$4,249,500	00

COCHITUATE WATER SINKING FUND RECEIPTS.

[Since the Establishment of the Board of Sinking Fund Commissioners in 1871.]

WATER DEPARTMENT.

9

YEAR.	From Tax Levy of City Income.	Interest on Investments.	Interest on Bank Deposits.	Water Rates, etc.	Premiums on Loans.	Other Sources.	Totals.
1871, April 30, received from Com- mittee on Reduction of Debt,	\$1,100,000 00	.....	.....	.....	.....	.....	\$1,100,000 00
1871-72.....	14,325 00 Taxes, 9,375 00	\$61,000 00	\$349 67	.....	.....	.....	85,049 67
1872-73.....	9,000 00	70,137 50	1,017 80	.....	.....	.....	80,155 30
1873-74.....	30,090 00	76,799 60	2,072 65	.....	.....	.....	108,962 25
1874-75.....	75,973 28	82,842 25	2,121 13	.....	.....	.....	160,936 66
1875-76.....	65,554 00	85,470 00	3,617 55	.....	.....	\$386 00	155,027 55
1876-77.....	234,814 00	86,245 66	4,119 47	\$26,480 18	.....	915 46	352,574 77
1877-78.....	Taxes, 214,500 00	85,830 85	10,809 31	27,099 92	.....	.....	338,240 08
1878-79.....	Taxes, 207,456 00	93,264 49	6,181 26	177,195 91	.....	9,874 21	493,971 87
1879-80.....	.....	90,472 42	5,687 62	214,707 24	.....	4,411 64	315,278 92
1880-81.....	.....	86,460 00	167 32	195,668 90	.....	1,762 04	284,058 26
1881-82.....	.....	96,546 35	2,767 90	193,840 36	.....	494 08	293,648 69
1882-83.....	.....	105,129 51	8,486 33	216,581 72	.....	1,241 04	331,438 60
1883-84.....	Taxes, 973 00	138,120 90	2,268 22	.....	.....	.....	141,362 12
1884-85.....	.....	143,049 45	7,510 40	209,258 39	.....	.....	359,818 24
1885-86.....	.....	156,694 01	5,804 31	120,129 12	.....	442 27	283,069 71
1886-87.....	Taxes, 75,496 00	181,264 89	2,644 70	297,928 95	.....	5,081 12	562,415 66
1887-88.....	.....	199,883 90	4,178 16	221,620 11	.....	.....	425,682 17
1888-89.....	.....	213,048 22	8,958 69	256,013 57	\$11,552 50	.....	489,572 98
1889-90.....	.....	228,000 83	11,730 60	300,903 00	36,092 50	.....	576,726 93
Amount carried forward.....	\$2,037,556 28	\$2,280,260 83	\$90,493 09	\$2,457,427 37	\$47,645 00	\$24,607 86	\$6,937,990 43

COCHITUATE WATER SINKING FUND RECEIPTS.— *Concluded.*

YEAR.	From Tax Levy of City Income.	Interest on Investments.	Interest on Bank Deposits.	Water Rates, etc.	Premiums on Loans.	Other Sources.	Totals.
<i>Amount brought forward.</i>	\$2,037,556 28	\$2,280,260 83	\$90,493 09	\$2,457,427 37	\$47,645 00	\$24,607 86	\$6,937,990 43
1890-91		229,509 17	29,763 94	242,675 22	36,530 00	.....	538,478 33
1891-92		175,808 33	22,560 16	275,014 05	.....	78,865 00	552,247 54
1892-93		260,506 20	30,148 34	240,435 00	16,413 50	.....	547,503 04
1893-94		298,224 44	18,133 03	299,467 27	14,621 75	.....	630,446 49
1894-95		312,332 05	18,524 22	297,518 29	.....	9,894 12	638,268 68
1895-96		378,819 55	5,892 29	205,791 00	64,690 00	.....	655,192 84
1896-97		403,840 02	5,225 08	194,740 00	.....	616 50	604,421 60
1897-98		421,928 45	8,337 21	193,395 00	8,833 50	15,877 86	648,372 02
1898-99		417,142 02	5,806 85	193,395 00	.....	8,016 00	624,359 87
1899-1900		383,662 97	7,632 45	209,824 00	29,835 70	2,148 90	633,104 02
1900-1901		397,985 35	15,948 83	206,489 00	.....	.....	620,423 18
1901-1902		325,030 96	31,199 25	.....	.....	* 609,000 00	965,230 21
1902-1903		313,707 65	37,297 28	.....	.....	.....	351,004 93
1903-1904		149,255 27	8,318 82	.....	.....	282 10	157,856 19
1904-1905		260,239 40	5,547 25	.....	.....	.....	265,786 65
1905-1906		242,176 39	13,015 36	.....	.....	.....	255,191 75
1906-1907		171,618 65	16,038 95	.....	.....	.....	187,657 60
1907-1908		126,325 04	2,064 84	.....	.....	.....	128,389 88
1908-1909		126,812 87	2,130 23	.....	.....	.....	128,943 10
	\$2,037,556 28	\$7,675,185 61	\$374,077 47	\$5,016,171 20	\$218,569 45	\$749,308 34	\$16,070,868 35

* Waterworks Fund.

Cochituate Water Debt, Gross and Net.

At the Close of Each Fiscal Year.

FISCAL YEAR.	Gross Debt.	Sinking Funds.	Net Debt.
1847-48.....	¹ \$2,129,056 32	.....	\$2,129,056 32
1848-49.....	3,787,328 98	.....	3,787,328 98
1849-50.....	4,463,205 56	.....	4,463,205 56
1850-51.....	4,955,613 51	.....	4,955,613 51
1851-52.....	5,209,223 26	.....	5,209,223 26
1852-53.....	5,972,976 11	.....	5,972,976 11
1853-54.....	5,432,261 11	.....	5,432,261 11
1854-55.....	5,403,961 11	.....	5,403,961 11
1855-56.....	5,230,961 11	.....	5,230,961 11
1856-57.....	5,031,961 11	.....	5,031,961 11
1857-58.....	4,724,961 11	.....	4,724,961 11
1858-59.....	4,754,461 11	.....	4,754,461 11
1859-60.....	3,846,211 11	.....	3,846,211 11
1860-61.....	3,455,211 11	.....	3,455,211 11
1861-62.....	3,012,711 11	.....	3,012,711 11
1862-63.....	2,992,711 11	.....	2,992,711 11
1863-64.....	2,992,711 11	.....	2,992,711 11
1864-65.....	2,942,711 11	.....	2,942,711 11
1865-66.....	3,152,711 11	.....	3,152,711 11
1866-67.....	3,370,711 11	.....	3,370,711 11
1867-68.....	3,867,711 11	.....	3,867,711 11
1868-69.....	5,107,711 11	.....	5,107,711 11
1869-70.....	5,731,711 11	.....	5,731,711 11
1870-71.....	6,482,711 11	\$1,100,000 00	5,382,711 11
1871-72.....	6,812,711 11	1,185,049 67	5,627,661 44
1872-73.....	6,912,711 11	1,268,234 97	5,644,476 14
1873-74.....	7,863,711 11	1,372,952 62	6,490,757 49
1874-75.....	8,123,711 11	1,533,890 28	6,589,820 83
1875-76.....	9,735,711 11	1,560,917 83	8,174,793 28
1876-77.....	11,548,711 11	1,709,492 60	9,839,218 51
1877-78.....	11,545,273 98	2,043,764 73	9,501,509 25
1878-79.....	11,753,273 98	2,143,847 85	9,609,426 13
1879-80.....	11,697,273 98	1,771,692 92	9,925,581 06
1880-81.....	11,631,273 98	1,989,300 88	9,641,973 10
1881-82.....	11,631,273 98	2,281,857 89	9,349,416 09
1882-83.....	11,955,273 98	2,607,768 46	9,347,505 52
1883-84.....	12,882,273 98	2,746,505 58	10,135,768 40
1884-85.....	13,045,473 98	3,106,323 82	9,939,150 16
1885-86.....	13,491,473 98	3,385,201 26	10,106,272 72
1886-87.....	14,142,273 98	3,947,616 92	10,194,657 06
1887-88.....	14,741,273 98	4,373,304 09	10,367,969 89
1888-89.....	14,941,273 98	4,864,092 54	10,077,181 44
1889-90.....	15,696,273 98	5,440,819 47	10,255,454 51
1890-91.....	16,267,773 98	5,979,297 80	10,288,476 18
1891-92.....	16,423,773 98	6,471,545 34	9,952,288 64
1892-93.....	16,758,773 98	7,019,058 38	9,739,715 60
1893-94.....	17,055,273 98	7,649,504 87	9,405,769 11
1894-95.....	17,761,273 98	8,444,773 55	9,316,500 43
1895-96.....	18,261,273 98	9,099,966 39	9,161,307 59
1896-97.....	18,261,273 98	9,704,387 99	8,556,885 99
1897-98.....	17,911,273 98	9,852,760 01	8,058,513 97
1898-99.....	17,121,273 98	9,487,119 88	7,634,154 10
1899-1900.....	17,306,273 98	9,870,223 90	7,436,050 08
1900-1901.....	11,960,273 98	10,144,647 08	1,815,626 90
1901-1902.....	11,351,917 28	10,422,449 77	929,467 51
1902-1903.....	9,501,000 00	8,893,615 94	607,384 06
1903-1904.....	8,227,000 00	7,337,902 79	889,097 21
1904-1905.....	8,224,000 00	7,600,689 44	623,310 56
1905-1906.....	6,671,250 00	5,943,222 39	728,027 61
1906-1907.....	4,562,500 00	3,697,913 53	864,586 47
1907-1908.....	4,531,500 00	3,794,779 37	736,720 63
1908-1909.....	4,249,500 00	3,637,956 71	611,543 29

¹ No account taken of amounts borrowed temporarily from 1846 to 1852 and afterwards funded by the issue of water bonds that figure in this statement.

CONTRACTS MADE AND PENDING DURING YEAR COMMENCING FEBRUARY 1, 1908, AND ENDING
JANUARY 31, 1909.

MISCELLANEOUS CONTRACTS.

Contracts marked thus (*) are completed.

DATE.	CONTRACTORS.	MANNER OF AWARDING CONTRACT.	WORK.	PRICE OR AMOUNT.	PAID ON CONTRACT.		
					Previous Year.	Year 1908- 1909.	Total.
1906.							
* Nov. 22,	Robert Eagar.....	{ A u t h o r i t y o f Mayor, without advertising.... }	{ Laying line of 48-inch water pipe in Prentiss and Parker streets and in Longwood avenue from Columbus avenue to St. Alphon- sus street..... }	{ \$1.80 per linear foot for trench work and laying pipe.... \$5 per cubic yard for rock ex- cavation..... 17 cents per linear foot for re- setting edgestones, includ- ing all incidentals..... 50 cents per square yard for repaving and resetting crosswalks, including all in- cidental..... }	\$10,193 36	\$2,640 50	\$12,833 86
1907.				{ Basis of last year's contract price plus increase in price of raw materials. Prices to be adjusted quarterly.... Prices last year: No. 1, 25 cents per pound... No. 2, 25½ " " " " " " No. 3, 20 " " " " " "	10,924 78	3,106 03	14,030 81
* Feb. 28,	J. H. McCafferty & Co.	{ A u t h o r i t y o f Mayor, without advertising.... }	{ Composition castings for year ending January 31, 1908..... }				
* Nov. 1,	Foxboro Foundry Co.	{ A u t h o r i t y o f Mayor, without advertising.... }	{ Miscellaneous iron castings for three months from November 1, 1907, to January 31, 1908..... }	{ No. 1, @ 3½ cents per pound } { No. 2, @ 3⅜ cents per pound. }	2,307 88	6,344 12	8,652 00

MISCELLANEOUS CONTRACTS.—Concluded.

Contracts marked thus (*) are completed.

DATE.	CONTRACTORS.	MANNER OF AWARDING CONTRACT.	WORK.	PRICE OR AMOUNT.	PAID ON CONTRACT.		
					Previous Year.	Year 1907- 1908.	Total.
1908.							
* June 22,	Hygeia Ice Co.....	{ One of three bids, all at same price in competition; advertedised..... }	{ Furnishing ice for public drinking fountains in City Proper, South Boston, Roxbury and West Roxbury, from June 12 to September 12, 1908..... }	\$3 per ton, 2,000 pounds.....	.....	.....	2
Aug. 6,	Camden Iron Works.	{ Lowest of three bids in com- petition; adver- tised..... }	{ Cast-iron water pipes and special castings delivered at yard, 710 Albany street..... Estimated quantities: 5 tons 4-inch pipe, B .. 70 " 6-inch " " .. 170 " 8-inch " " .. 300 " 10-inch " " .. 460 " 12-inch " " .. 280 " 16-inch " " .. 10 " 24-inch " " .. 410 " 48-inch " 1A .. 25 " special castings..... }	\$22.45 per ton, 2,000 pounds, \$22.30 per ton, 2,000 pounds. \$50 \$115.....	.....	\$39,145 59	\$39,145 59
* Oct. 9,	Carl E. Fosberg.....	{ Lowest bid in competition; not advertised, }	{ Painting fence surrounding Water Department yard, Gibson street, Dorchester, two coats both sides..... }		.....	115 00	115 00
Nov. 23,	Eastern Salt Co....	{ Lower of two bids in competition; not advertised. }	Salt for use on hydrants, etc., during winter season of 1908- 1909.....	60 cents per sack delivered) at the several divisions.... }	.....	1,350 60	1,350 60

¹ Changed to "B" weight by subsequent order of Water Commissioner.

² \$2,603.92 paid from special appropriation.

CONTRACTS FOR TRENCH WORK, ETC.

DATE.	CONTRACTORS.	MANNER OF AWARDING CONTRACT.	LOCATION.	QUANTITIES AND PRICES BID.				PAID ON CONTRACT.	
				Linear Feet of Trench.	Cu. Yds. Excavation and Refilling.	Cu. Yds. Rock Excavation.	Sq. Yds. Paving.	Extra Work.	Total.
1907.									
Oct. 1,	Patrick H. Bradley & Co.....	Without competition.....	{ Laying 10-inch and 8-inch water pipes in Necco street and Necco court, respectively.....	{ 382 @ 40c.	{ }	{ 19.6 @ \$5	{ 114 @ 25c.	{ }	{ \$251 70* 27 60†
Dec. 5,	Orient Construction Company,	Without competition.....	{ Laying 8-inch water pipe, Faxon street, East Boston.....	{ 356.5 @ 50c.	{ }	{ }	{ }	\$35 08	213 33
Dec. 28,	Daniel E. Lynch.....	Without competition.....	{ Laying 8-inch water pipe, Rockdale street, Dorchester.....	{ 274 @ 50c.	{ }	{ 50 @ \$5	{ }	25 30	412 30
1908.									
April 22,	Hub Construction Company..	{ Competition; not advertised; next to lowest bid. Lowest bid (at 25 cents, \$1 and \$5, respectively) withdrawn....	{ Laying 10-inch water pipes in Prince street extension, West Roxbury....	{ 573 @ 46c.	{ 17.2 @ \$1 10	{ @ \$4	{ }	4 89	287 39
May 8,	Frank A. Foster.....	{ Lowest bid in competition; not advertised.....	{ Laying 12-inch water pipes in Welling-ton Hill street, Dorchester.....	{ 1,703 @ 40c.	{ 13 @ 75c	{ 26 @ \$4	{ }	2 74	797 69
June 9,	Hub Construction Company..	{ Lowest bid in competition; not advertised.....	{ Laying 12-inch water pipes in Itasca street, Dorchester.....	{ 453 @ 38c.	{ 14.2 @ \$1	{ 2 @ \$4	{ }	29 51	223 85

* Paid to contractor.

† Expended by city to complete work.

CONTRACTS FOR TRENCH WORK, ETC.—Continued.

DATE.	CONTRACTORS.	MANNER OF AWARDING CONTRACT.	LOCATION.	QUANTITIES AND PRICES BID.				PAID ON CONTRACT.	
				Linear Feet of Trench.	Cu. Yds. Excavation and Refilling.	Cu. Yds. Rock Excavation.	Sq. Yds. Pav. Ins.	Extra Work.	Total.
1908. June 19,	{ Fred S. and A. D. Gore Corporation	{ Competition; not advertised; next to lowest bid. Lowest bid (at 36 cents, 60 cents, \$5 and 40 cents, respectively) withdrawn.	{ Relaying water pipes in Parkman street and partly across Dorchester avenue and Adams street, Dorchester. (12-inch in place of 6-inch.)	{ 1,308 @ 47c.	{ 52.3 @ 60c.	{ 0.5 @ \$4 50	{ 28.4 @ 50c.	{ \$14 78	{ \$677 37
June 24,	Frank A. Foster	{ Lowest bid in competition; not advertised.	{ Relaying water pipes in Gibson street and partly across Adams street, Dorchester. (10-inch in place of 6-inch.)	{ 1,142 @ 49c.	{ 26 @ 50c.	{ 9.1 @ \$1	{ 29.6 @ 50c.	{ \$4 78	{ 601 26
July 3,	John H. Gerrish	{ Lowest bid in competition; advertised.	{ Laying 12-inch water pipes, flexible joints, between Moon and Long Islands.	{ Estimated feet \$3 40	{ mated to lay.	{ 3,200 linear	{ linear	{	{ Not completed. (\$7,000*
July 3,	John H. Gerrish	{ Lowest bid in competition; advertised.	{ Laying 4-inch water pipes, flexible joints, between Long and Rainsford Islands.	{ Estimated feet \$3 95	{ mated to lay.	{ 3,525 linear	{ linear	{	{ Not completed. (\$6,000*
July 22,	John A. Costello & Co.	{ Lowest bid in competition; not advertised.	{ Relaying water pipes in Hampshire street, Roxbury, from Linden Park street to Whittier place. (8-inch in place of 6-inch.)	{ 937.5 @ 46c.	{ 18 @ \$4	{ @ 10c.	{ 17 @ 80c.	{ 39 10	{ 555 95
Aug. 5,	Hub Construction Company	{ Lowest bid in competition; not advertised.	{ Laying (and lowering about 60 feet) 20-inch water pipes in Telegraph, Gates and Dorchester streets, South Boston.	{	{ 1,052 @ \$1 10	{ @ \$4	{ 94 @ 40c.	{ 102 06	{ 1,296 86
Aug. 6,	{ Fred S. and A. D. Gore Corporation	{ Lowest bid in competition; not advertised.	{ Laying 10-inch water pipes in South Munroe terrace and partly across Neponset avenue and Train street, Dorchester.	{ 928 @ 60c.	{ 26.2 @ \$1	{ 8 @ \$2 50	{	{ 3 02	{ 606 02

Sept. 2,	Frank H. Cowin Company...	{Lowest bid in competition; not advertised.....	Laying 8-inch water pipes in Johnson road, West Roxbury.....	{1,108 @ 42c.	21 @ 50c.	4.5 @ \$4 50	{.....	496 11
Sept. 15,	{Fred S. and A. D. Gore Corporation.....	{Lowest bid in competition; not advertised.....	{Relaying water pipes in Clarendon street, from Warren avenue to Columbus avenue. (12-inch in place of 6-inch.).....	{1,097 @ 59c.	10 @ 50c.	@ 50c.	{21 @ 50c.}	668 48
Sept. 17,	{John A. Costello & Co. (assigned to Pacific Surety Co.)	{Lowest bid in competition; not advertised.....	{Relaying water pipes in Battery-march street, from Milk street to High and Broad streets. (10-inch in place of 6-inch.).....	{820 @ 70c.	129 @ 60c.	1 @ 1c.	{383 @ 35c.}	864 52
Oct. 5,	Robert Eagar, Jr.....	{Lowest bid in competition; advertised.....	Laying 12-inch water pipes in Washington street, West Roxbury.....	{1,459 @ \$1	43 @ 50c.	382 @ 1c.	{.....}	1,484 32
Oct. 7,	Thomas H. Connolly.....	{Only bid in response to invitation; not advertised.....	Laying 12-inch water pipes in Terminal street, Charlestown.....	{Estimated feet to lay. 90c.	Estimated to lay. 50c.	970 line ear \$4	{.....}	{Not completed. \$831 60*
Oct. 12,	Daniel E. Lynch.....	{Lowest bid in competition; not advertised.....	Relaying water pipes in Corning street. (12-inch in place of 6-inch.)..	{347 @ 65c.	26 @ 80c.	@ \$4 50	{16 @ 50c.}	254 35
Oct. 20,	William L. Dolan.....	{Lowest bid in competition; not advertised.....	{Relaying water pipes in Magnolia and Wayland streets, Dorchester. (12-inch in place of 6-inch.).....	1,283 @ 55c.	2 @ 45c.	5.7 @ \$3	{7 @ 45c.}	811 90
Oct. 31,	Thomas Burke.....	{Lowest bid in competition; not advertised.....	{Relaying water pipes in Massachusetts avenue, from Washington street to Tremont street, and partly across Tremont street. (12-inch in place of 4-inch and 6-inch.).....	{1,304 @ 47c.	58.5 @ 70c.	@ 1c.	{64 @ 35c.}	701 66
Nov. 12,	Thomas H. Connolly.....	{Lowest bid in competition; not advertised.....	{Relaying water pipes in Chelsea street, East Boston, from south side of Porter street to 20 feet beyond north line of Brooks street. (16-inch in place of 12-inch.).....	{Estimated feet. 70c.	Estimated \$1	1,460 line ear 1c.	{.....}	{Not completed. \$683 90*

* Paid on account.

CONTRACTS FOR TRENCH WORK, ETC.—*Concluded.*

DATE.	CONTRACTORS.	MANNER OF AWARDING CONTRACT.	LOCATION.	QUANTITIES AND PRICE BID.				PAID ON CONTRACT.	
				Linear Feet of Trench.	Cu. Yds. Excavation and Refilling.	Cu. Yds. Rock Excavation.	Sq. Yds. Pav- ing.	Extra Work.	Total.
1908.									
Nov. 13,	Robert Eagar, Jr.	{ Awarded without competition at same prices as under his contract of October 5, 1908, for laying pipes in same street }	{ Laying 10-inch water pipes in easterly side of Washington street, West Roxbury, from Rockland street to Grove street, and northerly from Grove street about 300 feet. }	1,687 @ \$1	210 @ 50c.	259 @ 1c.	 }	\$258 75	\$2,053 34
Nov. 13,	James H. Ferguson.	{ Lowest bid in competition; not advertised. }	{ Laying 6-inch water pipes on Long Island from end of 4-inch flexible joint pipe to 4-inch main. }	862 @ 75c.	20 @ \$1	0.5 @ \$2	 }	87 20	754 70
Nov. 14,	Bryne Contracting Company..	{ Lowest bid in competition; not advertised. }	{ Laying 12-inch water pipes in Washington street, West Roxbury, from La Grange street to Heron street.. }	1,627 @ 45c.	@ 50c.	305 @ \$4	 }	75 30	2,027 45
Nov. 17,	Daniel E. Lynch.	{ Lowest bid in competition; not advertised. }	{ Relaying water pipes in Chelsea street, East Boston, from south side of Porter street to and partly across Maverick street. (16-inch in place of 12-inch.) }	Estimated 80c. 90c.	1,370 linear	\$3	50c. }	 }	{ Not completed.
Nov. 23,	John A. Costello & Co.	{ Lowest bid in competition; advertised. }	{ Laying 48-inch water pipes in Longwood avenue, from Brookline avenue to Riverway bridge path... }	617 @ \$1 95	.....	@ \$3	 }	203 55 *	\$1,587 60†
Dec. 2,	John A. Costello & Co.	Without competition.	{ Moving 296 linear feet of 12-inch water pipe in Longwood avenue, between Brookline avenue and Autumn street, a distance of 18 inches, without cutting pipe. }	75c. per line moved.	.....	ar foot of pipe	 }	 }	222 00

* Work partially done, \$180.90.

† Contract terminated with approval of Mayor, and work to be completed by city.

CONTRACTS FOR BLASTING ROCK IN PIPE TRENCHES, — MADE WITHOUT ADVERTISING FOR BIDS.

DATE.	CONTRACTOR.	Manner of Awarding Contract.	LOCATION.	Quantity Paid For.	Price or Amount.	Paid on Contract.
1907.						
Nov. 26,	John Guarino.....	Lowest bid in com- petition.....	Fifield street, Dorchester.....	36 cubic yards.....	\$5 49	\$197 64
Dec. 28,	John Guarino.....	Lowest bid in com- petition.....	Strathecona road, Dorchester.....	29.9 cubic yards.....	3 97	118 70
1908.						
Jan. 28,	Robert J. O'Brien...	Lowest bid in com- petition.....	Allston street, Brighton.....	22.4 cubic yards.....	4 00	89 60
Feb. 24,	Thomas Burke.....	Lowest bid in com- petition.....	Hawes avenue, Dorchester.....	89.3 cubic yards.....	3 00	267 90
May 6,	F. L. Williams.....	Lowest bid in com- petition.....	Sparrow street, West Roxbury.....	24.7 cubic yards.....	4 00	98 80
June 16,	John A. Costello & Co.	Lowest bid in com- petition.....	Whitney park, Dorchester.....	31.9 cubic yards.....	3 90	124 41
Sept. 10,	Thomas Burke.....	Lowest bid in com- petition.....	Santuit street, Dorchester.....	48.7 cubic yards.....	3 74	182 14
Dec. 16,	John McCourt.....	Lowest bid in com- petition.....	Commonwealth terrace, Brighton.....	.....	3 75	Work completed but not paid for. 81 cubic yards, \$303.75.
Dec. 26,	Thomas Burke.....	Lowest bid in com- petition.....	Hollingsworth street, Dorchester.....	.....	4 49	Work completed but not paid for. 17.2 cubic yards, \$77.23.

REPORT OF INCOME DIVISION.

OFFICE OF GENERAL SUPERINTENDENT,
CITY HALL, BOSTON, February 1, 1909.

WILLIAM E. HANNAN, ESQ.,
Water Commissioner:

DEAR SIR,— I submit herewith the annual report of the Income Division, Water Department. The report of the Meter Service Division, also the statement of water rates, covers the financial year ending January 31, 1909; the remainder of the report is rendered for the calendar year ending December 31, 1908,— it being impracticable, owing to the nature of our accounts, to render it for the financial year.

Respectfully submitted,

J. H. CALDWELL,
General Superintendent Income Division.

TABLE I.
Statement of Water Rates, January 31, 1909.

ACCOUNT OF YEAR.	Amount Assessed.	Amount Abated.	Amount Collected.	Balance Outstanding.
1895.....	\$2,266,519 08	\$55,510 53	\$2,211,008 55	.....
1896.....	2,568,246 04	*95,162 39	2,473,083 65	.....
1897.....	2,630,413 37	53,864 09	2,576,549 28	.....
1898.....	2,342,804 58	†235,414 43	2,107,390 15	.....
1899.....	2,414,731 72	†258,449 66	2,156,282 06	.....
1900.....	2,197,026 64	46,873 45	2,150,153 19	.....
1901.....	2,264,845 26	46,713 28	2,218,131 98	.....
1902.....	2,327,996 91	43,706 89	2,284,290 02	.....
1903.....	2,386,428 02	58,050 51	2,328,347 51	\$30 00
1904.....	2,391,751 16	38,290 92	2,352,679 94	780 30
1905.....	2,446,978 39	36,093 08	2,410,871 31	14 00
1906.....	2,524,105 25	37,534 28	2,486,505 97	65 00
1907.....	2,618,400 60	34,959 33	2,583,427 27	14 00
1908.....	2,644,677 24	20,657 30	2,594,208 33	29,811 61
‡1909.....	1,364,908 85	1,660 52	121,788 18	1,241,460 15

The above amounts for the years 1895, 1896 and 1897 include both Cochituate and Mystic supply accounts. The contracts to supply Chelsea, Somerville and Everett with Mystic water were abrogated by the Metropolitan Water Act of January 1, 1898.

* This amount includes certain city department accounts, abated by order of the Mayor.

† These amounts include abatements of city department accounts, under order of the City Council, approved by the Mayor on March 5, 1900, said order also abolishing all charges for water used by city departments.

‡ The statement of water rates for the year 1909 represents annual accounts only; the quarterly meter accounts can only be estimated at this time.

TABLE II.

Kind and Number of Fixtures in use December, 1908.

	Number.
Bathtubs.....	94,964
Bowls.....	130,825
Foot tubs.....	570
Sinks.....	192,685
Taps.....	35,697
Urinals, automatic.....	5,318
" otherwise.....	490
Washtubs.....	151,308
Water-closets.....	194,303
Total fixtures.....	806,160

TABLE III.

Number and Amount of Abatements Allowed during the Year 1908.

ON ACCOUNT OF ASSESSMENTS FOR YEAR.	Number.	Amount.
1906.....	96	\$1,561 11
1907.....	1,764	16,440 15
1908.....	2,667	19,397 86
Totals.....	4,527	\$37,399 12

TABLE IV.

New Elevator, Motor and Service Pipes.

Elevator pipes.....	11
Motor pipes.....	2
Fire pipes.....	37
Service pipes.....	1,205
Total.....	1,255

TABLE V.

Turning Water Off and On.

For complaints.....	709
For repairs of service.....	3,834
For nonpayment of water bills.....	2,354
For waste.....	31
Turned on first time.....	1,131
Vacancies.....	2,792
Total.....	10,841

TABLE VI.

Off and On Receipts.

Received for turning water off and on for repairs, and deposited with City Collector.....	\$1,860 19
---	------------

TABLE VII.

WASTE DETECTION.

Water Inspection.

Waste reports.....	11,577
First re-examinations.....	8,277
Second re-examinations.....	2,652
Third re-examinations.....	632
Fine notices issued.....	271

TABLE VIII.

Defective Fixtures and Waste.

Tank fixtures leaking.....	12,583
Faucets leaking.....	7,242
Bursts inside.....	494
Bursts outside.....	17
Hopper-cocks leaking.....	155
Water-closets leaking.....	468
Willful waste.....	19

TABLE IX.

ELEVATOR AND MOTOR SERVICE FOR THE YEAR ENDING DECEMBER 31, 1908.

<i>Elevators.</i>		
Under supervision December 31, 1907	586	
Discontinued during year	8	
Changed to electric	3	
	<u>11</u>	
New elevators accepted during the year		575
		<u>9</u>
Under supervision December 31, 1908		<u>584</u>
Changed to tank and metered water and now under supervision		71
Inspections made		382
Accuracy tests made		357
Registering inaccurately and repaired by owners		41
Clock cord broken and repaired by owners		77
Clock hands broken and repaired by owners		5
<i>Motors.</i>		
Under supervision December 31, 1907	116	
Discontinued	2	
	<u> </u>	114
New motors added to service during the year		4
Under supervision December 31, 1908		<u>118</u>
Motors on meter		<u>17</u>

TABLE X.

FIRE PIPE SERVICE FOR THE YEAR ENDING DECEMBER 31, 1908.

Premises under supervision December 31, 1907	541
Supervision discontinued	10
	<u> </u>
Premises equipped during the year	531
	21
Under supervision December 31, 1908	<u>552</u>
Premises inspected	3,890
Total number of inspections of outlet valves	47,601
Total number of hydrant inspections	1,037
Total number of valves sealed and resealed	4,724
Total number of hydrant valves sealed and resealed	196
Meter by-passes under supervision December 31, 1907	37
Discontinued	2
	<u> </u>
By-passes, additional	35
	2
Under supervision December 31, 1908	<u>37</u>
Inspections made	<u>287</u>
Resealed	<u>18</u>

TABLE XI.

General Statement of Work Performed during Year Ending January 31, 1909.

	Meters.	Boxes.
Applied	434	115
Discontinued.....	238	.....
Changed.....	965	.....
Changed location.....	11	.....
Tested.....	2,685	.....
Repaired at shop.....	862	.....
Repaired at factory.....	113	.....
Repaired in service.....	314	153
Examined.....	181	.....
Lost.....	1	.....
Hayed.....	1,809	.....
Condemned.....	206	.....
Purchased.....	507	.....
In service.....	5,380	.....
In service (private).....	132	.....
At department shop.....	361	.....

TABLE XII.

Statement of Meters for Year Ending January 31, 1909.

Meters belonging to department January 31, 1908	5,441	
Purchased	507	
		5,948
Condemned during year	206	
Lost (in service)	1	
		207
Belonging to department January 31, 1909		<u>5,741</u>

Distribution of Meters January 31, 1909.

In service	5,380	
In shop	361	
		<u>5,741</u>

TABLE XIII.

Meters Applied.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....	.....	1	6	17	14	16	34	76	164
Hersey.....	1	.....	3	6	3	17	16	5	51
Hersey disc.....	.....	.....	.....	1	13	12	12	48	86
Worthington.....	.....	.....	1	3	1	1	5	.....	11
B. W. W.....	.....	.....	.....	.....	.....	.....	1	.....	1
Metropolitan.....	.....	.....	.....	.....	.....	.....	6	.....	6
Nash.....	.....	.....	.....	.....	1	12	47	14	74
Empire.....	.....	.....	.....	.....	1	1	.....	.....	2
Worthington disc.....	.....	.....	.....	1	.....	2	5	5	13
Thomson.....	.....	.....	.....	.....	.....	.....	1	2	3
Keystone.....	.....	.....	.....	.....	1	1	13	1	16
Gem.....	2	.....	.....	.....	.....	.....	.....	.....	2
Lambert.....	.....	.....	.....	.....	.....	1	1	3	5
Totals.....	3	1	10	28	34	63	141	154	434

TABLE XIV.

Meters Discontinued.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....	.....	3	.....	8	7	10	20	58	106
Hersey.....	1	3	3	5	6	13	11	1	43
Hersey disc.....	.....	.....	.....	.....	4	6	10	15	35
Worthington.....	.....	1	2	5	5	6	4	.....	23
B. W. W.....	.....	.....	.....	.....	.....	.....	1	.....	1
Metropolitan.....	.....	.....	.....	.....	.....	2	10	.....	12
Nash.....	.....	.....	.....	.....	.....	1	10	.....	11
Worthington disc.....	.....	.....	.....	.....	.....	.....	1	.....	1
Thomson.....	.....	.....	.....	.....	.....	.....	1	.....	1
Gem.....	1	.....	.....	.....	.....	.....	.....	.....	1
Lambert.....	.....	.....	.....	1	.....	.....	.....	3	4
Totals.....	2	7	5	19	22	38	68	77	238

TABLE XV.
Meters Changed.

CAUSE.	Number.	CAUSE.	Number.
Test.....	398	<i>Brought forward.....</i>	811
Rust.....	6	Leak at body.....	11
Not registering.....	142	Clock broken.....	19
Gravel.....	9	Did not mesh.....	38
Solder.....	4	Piston broken.....	9
No force.....	74	Valve broken.....	1
Stoppage.....	55	Ratchet broken.....	10
Heat.....	2	Leak at coupling.....	14
Gasket.....	1	Piston bound.....	15
Enlarged.....	39	Leak at spindle.....	11
Relocated.....	11	Clock train stuck.....	9
Frost.....	13	Spindle shaft broken.....	5
Gear loose.....	3	Disc broken.....	6
Intermediate broken.....	50	Defaced.....	6
Gear bound.....	4	Total number.....	965
<i>Carried forward.....</i>	811		

TABLE XVI.
Meters Condemned.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....							2	13	15
Worthington.....	1	1	2	12	13	41	36	1	107
Metropolitan.....				1	3	11	55	2	72
Hersey.....						1	1		2
B. W. W.....							7		7
Hersey disc.....							1	1	2
Ball & Fitts.....			1						1
Totals.....	1	1	3	13	16	53	102	17	206

TABLE XVII.
Meters Purchased.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....	1	.....	5	16	10	.....	.....	.....	32
Nash.....	.....	.....	.....	.....	6	84	117	24	231
Gem.....	2	.....	.....	.....	.....	.....	.....	.....	2
Hersey.....	1	.....	2	.....	.....	.....	.....	.....	3
Hersey disc.....	.....	.....	.....	.....	24	12	.....	40	76
Worthington disc.....	.....	.....	.....	18	.....	6	30	24	78
Keystone.....	.....	.....	2	1	2	2	27	3	37
Lambert.....	.....	.....	.....	.....	.....	24	24	.....	48
Totals.....	4	.....	9	35	42	128	198	91	507

TABLE XVIII.
Meters Repaired in Service.

CAUSE OF REPAIRS.	Number.
Glass broken.....	53
Ratchet broken.....	4
Clock broken.....	67
Cover broken.....	44
Spindle broken.....	2
Gear broken.....	2
Spindle leaking.....	70
Coupling leaking.....	67
Pawl stuck.....	1
Gear loose.....	1
Clock loose.....	1
Defaced.....	2
	314

TABLE XIX.

Meters Repaired in Factory.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....		1	1	4	6	10	9	42	73
Hersey.....		1	1	2	2	7	13		26
Hersey disc.....							1	2	3
Empire.....					1		1		2
Gem.....	1								1
Trident.....						1			1
Nash.....								1	1
Thomson.....							1	3	4
Lambert.....								2	2
Totals.....	1	2	2	6	9	18	25	50	113

TABLE XX.

Meters in Service January 31, 1909.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....	10	48	73	129	196	412	552	1,167	2,587
Worthington.....		11	25	106	89	319	172	1	723
Hersey.....	11	15	42	136	169	274	371	19	1,037
Metropolitan.....					8	29	225		262
Hersey disc.....	1		6	7	74	76	108	130	402
B. W. W.....							21		21
Lambert.....				2	3	1	8	3	17
Nash.....			3		4	62	116	22	207
Thomson.....							2	6	8
Gem.....	6	5		1					12
Empire.....					7	5	2		14
Trident.....						2			2
Torrent.....	1								1
Worthington disc.....				2		6	30	13	51
Keystone.....			2		2	2	27	3	36
Totals.....	29	79	151	383	552	1,188	1,634	1,364	5,380

TABLE XXI.

Private Meters in Service January 31, 1909.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....			2	5	3	8	3	11	32
Crown.....	6	3	2	5	19	9	4	32	80
Hersey.....		3	2	1	2	3		1	12
Gem.....	2								2
B. W. W.....							1		1
Nash.....								1	1
Hersey disc.....					1				1
Thomson.....					1				1
Ball & Fitts.....				1					1
Torrent.....		1							1
Totals.....	8	7	6	12	26	20	8	45	132

TABLE XXII.

Meters at Department Shop January 31, 1909.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....	2	3	6	9	5	6	9	48	88
Worthington.....		7	3	8	5	30	24	2	79
Metropolitan.....				1	1	4	26		32
Hersey.....	1	3	2	4	5	4	10	1	30
Hersey disc.....			1		1	1	3	5	11
B. W. W.....							1		1
Lambert.....						24	21	3	48
Rogers.....							1		1
Nash.....					2	25	3	4	34
Ball & Fitts.....				1			1		2
Gem.....	1	1	4	1					7
Keystone.....				1					1
Worthington disc.....				16				11	27
Totals.....	4	14	16	41	19	94	99	74	361

TABLE XXIII.

Meters Belonging to Department January 31, 1909.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Crown.....	12	51	79	138	201	418	561	1,215	2,675
Worthington.....		18	28	114	94	349	196	3	802
Hersey.....	12	18	44	140	174	278	381	20	1,067
Metropolitan.....				1	9	33	251		294
Hersey disc.....	1		7	7	75	77	111	135	413
B. W. W.....							22		22
Lambert.....				2	3	25	29	6	65
Nash.....			3		6	87	119	26	241
Thomson.....							2	6	8
Gem.....	7	6	4	2					19
Empire.....					7	5	2		14
Trident.....						2			2
Keystone.....			2	1	2	2	27	3	37
Torrent.....	1								1
Ball & Fitts.....				1			1		2
Rogers.....							1		1
Worthington disc.....				18		6	30	24	78
Totals.....	33	93	167	424	571	1,282	1,733	1,438	5,741

REPORT OF DISTRIBUTION DIVISION.

OFFICE OF THE SUPERINTENDENT,
710 ALBANY STREET, February 1, 1909.

WILLIAM E. HANNAN, ESQ.,
Water Commissioner:

SIR,—Following is the annual report of the Distribution Division for the year ending January 31, 1909:

ORGANIZATION.

From February 1, 1908, to March 26, 1908, the division was in charge of Assistant Water Commissioner James P. Lennon. Upon the latter date, the undersigned, Chief Clerk George H. Finneran, was placed in charge with the title "Official in Charge." The present organization is as follows:

Superintendent.—Chief Clerk George H. Finneran, acting in that capacity.

Assistant Superintendent (Northern Division).—Adam McClure.

Assistant Superintendent (Southern Division).—John W. Leahon.

Chief Clerk.—George H. Finneran.

11 clerks.

2 messengers.

2 janitors.

6 inspectors of work.

Machine Shop.—Foreman, Edward J. Bachelder.

23 machinists, helpers, etc.

5 blacksmiths and helpers.

1 engineman.

1 fireman.

1 patternmaker.

1 patternmaker's helper.

Carpenter Shop.—Foreman, Richard F. Neagle.

9 carpenters.

Plumbing Shop.—Foreman, B. F. Rogers.

14 plumbers, electricians and helpers.

3 laborers (trough cleaners).

Storeroom.—Storekeeper, John W. Sullivan.

3 assistants.

Main Yard (Albany Street).—Foreman, John J. Maguire.

34 yardmen.

23 teamsters and drivers.

11 stablemen.

6 painters.

7 concrete boxmakers and helpers.

5 men in yard storehouse.

Gate and Hydrant Inspection.—Foreman, Samuel J. Hallett.

21 men.

Main Pipe Gangs.

Foreman Doherty and 18 men.

Foreman Durand and 15 men.

Foreman McCarthy and 23 men.

Central District.—Repairers and service pipe men. Foreman, William T. Lenehan.

2 sub-foremen.

40 repairers.

10 service pipe men.

10 watchmen and night emergency men.

Brighton District.—Foreman, Thomas Neville.

13 men in Brighton yard.

4 men at Brookline reservoirs.

Charlestown District.—Foreman, Patrick Kelly.

21 men.

Dorchester District.—Foreman, Timothy Casey.

15 men.

East Boston District.—Foreman, William F. O'Donnell.

19 men.

West Roxbury District.—Foreman, Thomas C. McDonald.

22 men.

Parker Hill Reservoir.—2 men.

This makes a total of **421** men in the division. One year ago the total number of men was **486**. The average number of men at work daily during the year was **401**. The average number of men absent daily during the year was **39**. The average age of the men now in service is **52.2** years, and the average number of years of service per man is **15.3** years.

MAIN PIPE.

During the year **57,527** linear feet of mains were laid, relaid and relocated; and **25,496** linear feet were abandoned, and either taken from the ground or left therein, as conditions warranted. Gate valves, air valves and blow-offs were established and abandoned as stated in Table No. 1 appended to the text. The total mileage of mains now owned and operated by the department is **753.17**, consisting almost entirely of cast-iron pipe, there being 4,985 feet of 30-inch, and 6,180 feet of 20-inch wrought-iron, cement lined pipe in the system.

Of the amount laid, 554 feet of 6-inch, 10,767 feet of 8-inch, 2,739 feet of 10-inch and 5,513 feet of 12-inch were laid to supply new buildings in streets where water mains had not been laid, and high service to buildings in the business section.

Replacing old and inadequate mains, there were laid: 86 feet of 20-inch; 3,891 feet of 16-inch; 7,170 feet of 12-inch; 2,843 feet of 10-inch; 2,020 feet of 8-inch; 1,610 feet of 6-inch; and 54 feet of 4-inch.

On account of the abolishment of grade crossings in East Boston, and the operations of the Sewer, Bridge and State Highway Departments, the Boston Elevated Railway Company and the Boston Transit Commission, it was necessary to relocate the following lengths of main pipe: 125 feet of

36-inch; 283 feet of 30-inch; 220 feet of 20-inch; 141 feet of 16-inch; 4,985 feet of 12-inch; 184 feet of 10-inch; 287 feet of 8-inch; and 68 feet of 6-inch.

From a distribution standpoint the most important work was that of laying the 48-inch line in Longwood avenue, between Brookline avenue and parkway; the 20-inch line in Gates and Dorchester streets, South Boston; and the 12-inch and 4-inch submerged lines in Boston Harbor between Moon and Long Islands, and Long and Rainsford Islands, respectively; the replacement of the 6-inch, 8-inch and 12-inch mains in First and Dorchester streets with 16-inch; the 12-inch main in Chelsea street, East Boston, with 16-inch; the 12-inch main in Dover street with 16-inch; the 6-inch mains in Magnolia, Wayland, Parkman, Gibson, Clarendon, Corning and Batterymarch streets and Massachusetts avenue with 12-inch and 10-inch; the 8-inch main in Kilby and Congress streets with 12-inch; and about 1,650 feet of 2-inch, 3-inch, and 4-inch mains, in several of the streets and courts in the Charlestown district, with 6-inch.

The construction of that part of the 48-inch line in Longwood avenue, between Brookline avenue and parkway, completed the line planned to extend from Tremont street at Prentiss street to Beacon street at Coolidge's corner. The section between Tremont street and Muddy river in the parkway was laid by the Boston Water Department, and the section between Muddy river and Beacon street was laid by the Metropolitan Water and Sewerage Board. Connections are now made with the 30-inch and 36-inch low service mains in Tremont street at Prentiss street; the 16-inch low service main in Huntington avenue at Longwood avenue; the 40-inch and 12-inch low service mains at Brookline and Longwood avenues; and the 48-inch low service main in Beacon street at Coolidge's corner. It is planned by the Metropolitan Water and Sewerage Board to extend this line next year from Coolidge's corner to Chestnut Hill Reservoir by way of Beacon street, thus giving the city another direct supply line, and relieving it to a great extent from a possibly embarrassing position in the event of the shutting off of one or both 48-inch lines now leading from Chestnut Hill to the city. It is only good fortune that has spared the city thus far from a situation that is not at all beyond likelihood, resulting from the breaking of the Beacon street 48-inch, the Clinton road 48-inch, and the very precarious 30-inch line crossing the Charles river at Warren Bridge. This combination of accidents together with a large fire would produce an effect that would be serious, to say the least. The completion and operation of the Tremont street

Coolidge's corner 48-inch line has already produced beneficial results, a gain in head of about 10 feet being realized in the Back Bay and western section of the city, and pressures generally in the low service of the city proper are more equalized and better balanced.

On Telegraph Hill, South Boston, upon which was formerly located the South Boston Reservoir, the 20-inch low service supply by way of Dover and Fourth streets, and the 20-inch low service supply by way of Dudley street, Columbia road and Dorchester street, meet and merge. At times in the past, however, because of a reduction in the head due to unusual draught, the flow in these two mains has been unable to surmount the summit of the hill in quantity to be of practical value. Hence, they did not reinforce each other, and the supply in South Boston suffered accordingly. This has now been remedied by a connection of the two mains at a grade sufficiently low to insure under all ordinary fluctuations in the pressure a union under good head of the two supplies. The connection consists of a 20-inch main extending from Telegraph street, at Gates street, through Gates and Dorchester streets to Fourth street, where it joins the 20-inch line at that point. South Boston will not, however, be assured of anything approaching an adequate and unfailing supply until a feed is brought into the district by way of Congress street. This will be realized, it is hoped, the coming year, when the uncompleted section of a new 30-inch line is laid in Congress street between Atlantic avenue and Congress Street Bridge, and the proposed loop of 30-inch pipe is laid in Sleeper street, Northern avenue and C street.

Ever since 1888, when the system was extended to the islands in the harbor, the department has been dependent upon one line of submerged pipe between Moon and Long Islands. This was a 6-inch line, and in 1895 it froze and became hopelessly defective. Service was maintained by a temporary 2-inch lead pipe until another 6-inch line was laid in the same year. The frozen 6-inch and the 2-inch temporary pipes were then abandoned, and the new 6-inch line has since been the only means of supply for Long, Rainsford, George's and Gallop's Islands, until the latter part of the present year, when a new 12-inch flexible jointed pipe was laid between Moon and Long Islands and the water turned into the same. The 6-inch line is also in service and by connections on Long Island and the manipulation of gate valves in same, it is made to serve Rainsford Island only, while the new 12-inch serves Long, George's and Gallop's Islands. This division of duty insures a sufficient velocity in both pipes to keep the water

from freezing. At the same time that the 12-inch line was laid between Moon and Long Islands, a 4-inch flexible jointed line was laid between Long and Rainsford Islands, thus giving us a much needed connection between these two points. The old line had suffered much by the action of the tide, dragging anchors, and other submarine disturbances, and, as a consequence, was frequently out of service. A 2-inch lead pipe had been serving as an auxiliary supply, but, of course, was insufficient. We are now quite secure against adverse contingencies with two 4-inch and one 2-inch lines.

In First street, South Boston, between D and Dorchester streets, the 6-inch and 8-inch mains were replaced by a 16-inch main, thus giving that section, which is rated as a dangerous fire district, an ample supply. The new main connects indirectly with the 30-inch feed main in D street, and in Dorchester street it continues from First to Third streets, where connection is made with the 20-inch that extends through Third street to Q street, there reducing to a 16-inch, and continuing through Q street, the Strandway, Columbia road and Vale street to Dorchester street, where it unites with the 20-inch main in that street, thus forming a loop line around the edge of the peninsula and reinforcing the supply at those extreme points where a loss of head is ordinarily to be expected.

The 12-inch main in Chelsea street, East Boston, was partly relaid with 16-inch between Maverick square and Putnam street, thus making a start in a broad scheme of strengthening the fire service in the island and renewing the mains which are in many cases over fifty years old and in bad condition.

By laying a short stretch of 16-inch high service pipe in Dover street across Washington street, and making connections at that point at Harrison avenue, and opposite the bath house, a piece of 16-inch high service main, 365 feet long, that had been lying dead in the ground for three years, was made available, and completes a section, 450 feet long, of the proposed 16-inch high service main, which is intended to replace the 12-inch high service main in Dover street, between Columbus avenue and Fort Point channel, thereby increasing the South Boston high service supply.

In Magnolia and Wayland streets, Dorchester, the 6-inch mains were replaced by 12-inch mains, and the beginning of a general enlargement of the pipes in that section made.

In Parkman and Gibson streets, Dorchester, the 6-inch mains were replaced by 12-inch and 10-inch mains, respectively. These mains connect the Dorchester avenue and Adams street mains and aid materially in furnishing a better fire service in a section where it is much needed.

The enlargement of the 6-inch mains in Clarendon street, between Warren avenue and Columbus avenue, Corning street, between Shawmut avenue and Washington street, and Massachusetts avenue, between Washington and Tremont streets, to mains of 12 inches in diameter, furnishes in the South End district additional cross connecting lines of good capacity, which equalize the flow and conduct the supply in ample quantity to points of large consumption.

Kilby street, between Milk and State streets, was to be resurfaced and we took advantage of the same to relay the old 8-inch with 12-inch, thus bringing the size of pipe in that street up to a proper standard for the business district.

As the 6-inch main in Batterymarch street was in a very bad condition from corrosion and tuberculation, it was relaid with a 10-inch main, thereby increasing its capacity and raising it to the required standard for a down-town main.

COST OF MAIN PIPE WORK.

The following is a statement of the direct costs of the main pipe work performed during the year, with explanatory notes and a statement preceding it of prices upon which said costs are based:

Prices.

Main pipe, 3 inches to 42 inches, inclusive, at		\$0.0116 lb.
“ 48 inches, at		.01115 lb.
“ specials, small, at		.0285 lb.
“ “ large, at		.025 lb.
Gate valves, 3 inches, at		14.73 each.
“ 4 inches, at		16.71 each.
“ 6 inches, at		24.86 each.
“ 8 inches, at		31.69 each.
“ 10 inches, at		46.59 each.
“ 12 inches, at		53.83 each.
“ 16 inches, at		112.10 each.
“ 20 inches, at		287.19 each.
“ 24 inches, at		329.23 each.
“ 30 inches (with 6-inch by-pass), at		568.59 each.
“ 36 inches (with 6-inch by-pass), at		808.59 each.
Gate-valve boxes, small, wood, at		3.79 each.
“ “ “ concrete, at		7.24 each.
“ “ large, wood, at		4.72 each.
“ box frames and covers, at		.0225 lb.
Lead, at		.0445 lb.
Gasket, at		.06 lb.
Blocking, at		.019 feet.*
Clay, at		.0034 lb.
Firewood, at		.79 ft.
Cartage, short haul, at		.82 ton.
“ long haul, at		1.42 ton.
Single team (department), at		3.00 day.
Double team (department), at		5.00 day.
“ (hired), at		6.00 day.

NEW MAINS.

Forty-eight Inches in Diameter.

912 feet laid at a total cost of \$17.36 a linear foot.

9 feet laid at a total cost of \$27.83 a linear foot.

The 912 feet laid at a total cost of \$17.36 a linear foot was first let out by contract. The contractor assumed to excavate, back-fill, haul the pipes and specials from the yard at 710 Albany street, lay them in the trench, run and calk the joints, and furnish all necessary appurtenances and materials, except the pipes, specials and lead, all for \$1.95 per linear foot. The contractor laid 624 feet, when by reason of his exceeding the time limit and his apparent inability to finish the work, the job was taken from him and finished by the department. From the point where the department took up the work many difficulties were encountered. A section of 12-inch water main, 179 feet long, had to be removed from the line of the 48-inch, and relaid upon a bench in the southerly bank of the trench. At Autumn, Plymouth and Bellevue streets, the mains of these streets were raised or lowered as the case might be to allow for the passage of the 48-inch. The Longwood avenue 12-inch main at these points had to be relocated accordingly, so that in all there were 225 feet of 12-inch, 6 feet of 10-inch, and 12 feet of 8-inch mains relaid on account of the 48-inch main. At two different points catch-basin connections crossed the trench and, as they could not be raised, the 48-inch had to be lowered, so that for a distance of about 200 feet it was necessary to excavate a trench about 13 feet in depth. The material was a spongy clay that froze during the cold weather, and when the early thaws came caused no end of trouble. On account of the unstable consistency of the filling the trench had to be "horsed off" from traffic until the clay dried somewhat, and even then it was necessary to remove about a foot depth of the same and replace it with crushed stone and binding gravel and roll it with a road roller. Leaks developed when the water was turned into the new main and several excavations had to be made at points where it was thought they existed, but beyond a few joints that were somewhat "loose" no serious defect was found. Incidental to the search for these leaks we discovered a section of about 50 feet of vitrified pipe sewer broken and stopped by gravel. As this sewer ran along in the northerly bank of our trench, it was without doubt broken by settlement and a lateral movement due to insufficient sheathing on the part of the contractor. The department performed the excavation and backfilling and the Sewer Division relaid the sewer. All these conditions, together with the fact that the department's share of the work was done during the winter, contributed to the apparent high cost of the job. Two very valuable, though somewhat old, lessons are borne home to the department with positive emphasis as a result of our experience with this work; one, that the lowest bid does not always prove to be the cheapest, and the other, that it is almost folly to carry on a job of this kind during the winter by day work.

The 9-foot job was laid by the Metropolitan Water and Sewerage Board and the Boston Water Department combined, and was part of a connection between the Boston Water Department's 48-inch main in Beacon street, at Coolidge's corner, and the new 48-inch line laid by the Metropolitan Water Board in Longwood avenue and Harvard street, Brookline. Although the latter main is intended to continue through Beacon street to the reservoir, it was considered advisable to utilize the portion laid by a temporary connection, as stated. The work, which consisted of setting a 48-inch 3-way branch,

had to be done upon a Sunday with consequent extra pay for the men. The Metropolitan men did the digging and backfilling and the pipe work, and the Boston men assisted by closing the gates and emptying the line, and, after the work was completed, by reversing the operation. Connections are always more or less expensive and this job was no exception to the rule.

Thirty-six Inches in Diameter.

20 feet laid at a total cost of \$27.83 a linear foot.

This was a part of the connection referred to in the foregoing paragraph (48-inch) and the same conditions applied here as there.

Twenty Inches in Diameter.

940 feet laid at a total cost of \$6.70 a linear foot.

This was the line laid in Gates and Dorchester streets, South Boston. The Hub Construction Company performed the excavating and backfilling for \$1.10 per cubic yard. The Water Department laid and jointed the pipes. There was a cut of about 13 feet at the junction of Gates and Telegraph streets. Two brick gate-valve chambers of unusual depth had to be built at that point, and an expensive bitulithic and granite block, pitch and pebble pavement had to be relaid in Dorchester street at a cost of \$853.30. Three 20-inch gate valves were set in the line and numerous house drains were encountered and relaid. These conditions caused a rather expensive job.

Twelve Inches in Diameter.

- (a.) 590 feet laid at a total cost of \$1.43 a linear foot.
- (b.) 667 feet laid at a total cost of \$1.46 a linear foot.
- (c.) 3,244 feet laid at a total cost of \$2.08 a linear foot.
- (d.) 885 feet laid at a total cost of \$2.58 a linear foot.
- (e.) 641 feet laid at a total cost of \$4.53 a linear foot.
- (f.) 165 feet laid at a total cost of \$4.71 a linear foot.
- (g.) 218 feet laid at a total cost of \$5.21 a linear foot.
- (h.) 3,231 feet laid at a total cost of \$6.41 a linear foot.
- (i.) 92 feet laid at a total cost of \$12.58 a linear foot.

(a.) Laid through the grounds of the Consumptives' Hospital in Mattapan. The digging, backfilling and lowering of pipe into trench was done by a contractor in the employ of the hospital. The Water Department furnished the pipe and specials, lead, gasket, wood and blocking, and jointed the pipes.

(b.) Laid by the Metropolitan Water and Sewerage Board on account of the construction of the Metropolitan sewer through Washington street, Brighton. The Boston Water Department furnished the pipe and specials, the labor of inspection, and reconnected the service pipes. The Metropolitan people did the digging, backfilling, laying and jointing of the pipe, and furnished the lead, gasket, wood and blocking.

(c.) This work consisted of four jobs done by contract under the specifications usually employed, viz.: the contractor digs, backfills, lowers the pipe, and makes the joints, and the Water

Department furnishes the pipe, specials, lead, gasket and blocking. None of these jobs was in what could be termed "congested territory," although one of 923 feet was upon a wharf where dock mud, water, old timbers and a railroad crossing were encountered.

- (d.) This represents the cost of work done entirely by the department in five different places, all of which were out of town in free and unobstructed trenches.
- (e.) This is one job done entirely by the department in downtown streets, where conditions were about as bad as could be. The pipe was laid close to the edgestone of the sidewalk and it was necessary to carry it around several catch-basins. It crossed Eliot street at Tremont street, where all kinds of underground pipes and conduits were in the way, and at Seaver place it crossed Tremont street, passing under and over, as conditions warranted, two 30-inch water mains, one 12-inch water main, two gas mains, a telephone conduit, an electric light conduit, the street railway conduit, and the arch of the subway, which had to be cut away. In Hollis street the asphalt had to be replaced at a cost of \$157.13. Bridging had to be done almost continuously to facilitate travel, and many specials with an increased number of joints were required.
- (f.) Laid by department in rock during the winter. Our work was cut up and obstructed by reason of the presence of rock.
- (g.) Partly laid over bridge where additional expense was involved by the construction and painting of a box around the pipe, and fenders upon the bridge to protect the box. Another job is included in this average, where the pipe was laid through a stone culvert and considerable masonry was necessary.
- (h.) Laid by contract under water in Boston Harbor. Not only were the conditions unusual but the flexible joint pipe used was much more expensive than the ordinary pipe used on land, it costing \$38.40 a ton. More lead is used in the joints of this kind of pipe and conditions are in every way more expensive.
- (i.) Composed of connections where the amount of work done and the expensive stock used, such as branches, gates, etc., are greatly out of proportion to the length in feet. There is considerable waste of time in these jobs, caused by notifying before shutting off, shutting off and letting on, interruption by car and other traffic, and the impracticability of working all the time the full force of men required upon the job.

Ten Inches in Diameter.

- (a.) 2,535 feet laid at a total cost of \$2.08 a linear foot.
- (b.) 2,935 feet laid at a total cost of \$2.04 a linear foot.

- (a.) Department work under good conditions. No paving. No congestion.
- (b.) Contract work in outlying sections. Conditions good. No obstructions. Very little rock.

Eight Inches in Diameter.

- (a.) 1,518 feet laid at a total cost of \$1.44 a linear foot.
- (b.) 6,329 feet laid at a total cost of \$1.88 a linear foot.
- (c.) 3,251 feet laid at a total cost of \$2.47 a linear foot.
- (d.) 73 feet laid at a total cost of \$5.83 a linear foot.

- (a.) Contract work. Two jobs. Both in suburbs. Conditions excellent.
- (b.) Department work in uncongested streets. Conditions good.
- (c.) Department work where rock in varying quantity was encountered.
- (d.) Department work. Connections. Winter work. Car tracks.

Six Inches in Diameter.

- (a.) 1,068 feet laid at a total cost of \$1.51 a linear foot.
- (b.) 572 feet laid at a total cost of \$1.60 a linear foot.

- (a.) Contract work. Nine hundred thirty feet laid on islands in harbor. Difficulty in transportation, etc. One hundred thirty-eight feet laid in city street includes service pipe connections.
- (b.) Department work. Composed of seven small jobs where cost is disproportionately large.

Four Inches in Diameter.

- (a.) 140 feet laid at a total cost of \$4.22 a linear foot.
- (b.) 3,534 feet laid at a total cost of \$4.64 a linear foot.

- (a.) Contract work. Laid in shores of Long and Rainsford Islands. Tide interference and difficult transportation.
- (b.) Contract work. Submerged pipe in Boston Harbor, between Long and Rainsford Islands. Pipe cost \$41.50 a ton.

REPLACEMENT OF OLD MAINS.

Twenty Inches in Diameter.

86 feet laid at a total cost of \$7 a linear foot.

This was laid upon supports between bridge girders on Boston & Albany Railroad Bridge, Massachusetts avenue, near Boylston street. It replaced a 24-inch riveted steel pipe badly corroded. Supporting timbers had to be covered with tin as a protection from hot cinders from locomotives. Abutments had to be removed and rebuilt and asphalt on both sides relaid. Particularly difficult job, with interruptions from passing trains.

Sixteen Inches in Diameter.

- (a.) 1,370 feet laid at a total cost of \$2.48 a linear foot.
- (b.) 2,419 feet laid at a total cost of \$5.49 a linear foot.
- (c.) 102 feet laid at a total cost of \$8.23 a linear foot.

- (a.) Two contract jobs in Chelsea street, East Boston, done in early winter. Both stopped by bad weather; one nearly finished, the other about one-third finished. Department will have to finish the latter. Cost as stated includes only finished work, except that very likely some repaving will be necessary in the spring. There were many service connections to be transferred from old to new mains, and several hydrants set.
- (b.) Department work in First and Dorchester streets, South Boston. Done in winter. Frost in ground. Had to use thawing machine. Many services and branches were recon-

nected. Repaving cost \$1,098.97. Many delays occasioned by accommodating manufacturers in shutting off, preparatory to breaking out. Generally hard job done under unfavorable conditions.

- (c.) Department work. Two jobs. Both in car tracks. The larger one (89 feet), at junction of Dover and Washington streets, where interruption was incessant and underground conditions very bad. Small holes had to be dug and back-filled one at a time. The smaller one, a connection with special castings.

Twelve Inches in Diameter.

- (a.) 5,373 feet laid at a total cost of \$2.11 a linear foot.
- (b.) 227 feet laid at a total cost of \$2.59 a linear foot
- (c.) 393 feet laid at a total cost of \$3.67 a linear foot.
- (d.) 347 feet laid at a total cost of \$4.00 a linear foot.
- (e.) 736 feet laid at a total cost of \$5.10 a linear foot.
- (f.) 94 feet laid at a total cost of \$8.16 a linear foot.

- (a.) Contract work. Department furnished pipe and specials, lead, gasket and blocking, and made the service and main pipe connections; contractor did the excavating, backfilling, laying and jointing. This work was done in streets like Clarendon, Corning, Parkman (Dorchester), Wayland and Magnolia and Massachusetts avenue. Branch connections were frequent, services were many and "shut downs" were necessarily short while breaking out and laying new sections. It was typical "relaying" work with conditions sufficiently varied to make it a good basis for comparison. There was only one repaving item, that in Corning street, which was \$77.62 for a concrete base under an asphalt top. The asphalt top was not charged to the department.

- (b.) Department work. One job only in Erie street, Dorchester. Ordinary conditions.

- (c.) Department work. Old pipe was laid shallow. Trench had to be "bottomed." Rock taken out by day work. Temporary main upon bank of trench was laid to supply consumers while blasting and "bottoming" was in progress. The job was stopped several times by unavoidable causes.

- (d.) Department and contract work mixed. Department laid pipe, jointed same and reconnected services. Contractor excavated, backfilled and repaved. He was paid on a 15 per cent basis. Job was in Congress street, between State and Water streets. Congestion and general conditions very bad. Four branch connections with side streets. Bridging necessary at several points. Extra attention necessary in confining excavated material to small space. Car traffic a factor in delay.

- (e.) Department work. Brimmer, Kilby and Water streets. Usual down-town conditions, especially in Kilby street. Shutting off water while connections were being made objected to by consumers. Deference to their protests caused delay. Asphalt pavement cost \$350.88, which does not include cost of concrete base in Kilby and Water streets laid by department at a cost of about 28 cents a linear foot of trench. Trench had to be thoroughly rammed on account of immediate surfacing with asphalt. Extra amount of teaming.

- (f.) Department work. Connections in down-town congested streets. Large proportion of specials used, with consequent extra expense. Night work with extra rate of pay.

Ten Inches in Diameter.

- (a.) 1,239 feet laid at a total cost of \$1.75 a linear foot.
- (b.) 535 feet laid at a total cost of \$3.10 a linear foot.
- (c.) 860 feet laid at a total cost of \$3.34 a linear foot.
- (d.) 25 feet laid at a total cost of \$5.14 a linear foot.
- (e.) 175 feet laid at a total cost of \$5.75 a linear foot.
- (f.) 9 feet laid at a total cost of \$8.14 a linear foot.

- (a.) Contract work. Macadam streets. Good conditions. No expensive conditions. Usual specifications.
- (b.) Department work. Suburban streets. Done in winter. Car tracks in one job. Bad weather. Hard digging. Irregular attendance of men with consequent inconvenience in carrying along the work.
- (c.) Contract work. Batterymarch and Wendell streets. Connections had to be made by department after hours for convenience of consumers. Additional gates had to be set to facilitate connections and street had to be repaved at a cost of \$355.84.
- (d.) Department work. Connection including gate. Obstructions and interference. Asphalt and concrete base.
- (e.) Department work. Connections and short sections of relaying. Disproportionate amount of specials and some rock.
- (f.) Department and contract work mixed. Contract work on a 15 per cent basis. Job in Congress square at Congress street. Highly congested. Repaving and all the obstacles that go with down-town work.

Eight Inches in Diameter.

- (a.) 953 feet laid at a total cost of \$1.48 a linear foot.
- (b.) 517 feet laid at a total cost of \$1.87 a linear foot.
- (c.) 296 feet laid at a total cost of \$2.31 a linear foot.
- (d.) 57 feet laid at a total cost of \$4.04 a linear foot.
- (e.) 197 feet laid at a total cost of \$4.07 a linear foot.

- (a.) Contract work under generally good conditions. No paving or extra expense. Several branch connections and a little delay due to gas pipe lying in our trench.
- (b.) Department work under generally good conditions. No paving or extra expense. In outlying districts.
- (c.) Department work in macadam street, free of obstacles. Work done in winter. Includes expense of maintaining trench as it settled in "soft" weather.
- (d.) Department work in congested streets (Doane street and Exchange place). Gate valves and branches used, and asphalt and concrete base.
- (e.) Department work. Chiefly connections. Done in winter. Composed of seven small jobs. Stock cost disproportionately large.

Six Inches in Diameter.

1,610 feet laid at a total cost of \$1.70 a linear foot.

Nine jobs, all done by department in Charlestown district, replacing pipes of 2-inch, 3-inch and 4-inch diameter. Jobs

located in narrow streets and courts, or places where it was difficult to handle the pipe and care for the excavated material. Considerable "wheelbarrow" work and much relocation and regulation of services.

Four Inches in Diameter.

54 feet laid at a total cost of \$1 a linear foot.

Similar in every respect to the 6-inch work described in preceding paragraph.

RELOCATION OF MAINS.

Thirty-six Inches in Diameter.

125 feet laid at a total cost of \$2.03 a linear foot.

Trench work by Sewer Division. Same pipe used. Raised from 0 to 6 inches by springing line upward with lifting screws and redriving joints. Considerable delay by reason of Sewer Division not having trench excavated properly. Blow-off connection with sewer had to be severed and afterward reconnected in a different way. Line had to be emptied between Roxbury Crossing and Massachusetts avenue. Work done on Sunday with extra rate of pay.

Thirty Inches in Diameter.

- (a.) 125 feet laid at a total cost of \$2.03 a linear foot.
- (b.) 158 feet laid at a total cost of \$9.19 a linear foot.

(a.) Similar in every respect to the 36-inch job described in preceding paragraph. Both lines were parallel to each other in the same trench.

(b.) Trench work by Boston Elevated Railway Company. New line of pipe laid with a 16-inch and a 12-inch; all three laid side by side. Connections made on Sundays, and after hours, with extra cost thereby.

Twenty Inches in Diameter.

- (a.) 110 feet laid at a total cost of \$6.03 a linear foot.
- (b.) 110 feet laid at a total cost of \$6.70 a linear foot.

(a.) New line of pipe on bridge over Boston & Albany Railroad. Pipe suspended from I-beams. Considerable abutment work. Delayed and interrupted by other corporations at work at same time and place. Connections made underground at both ends of bridge.

(b.) Excavating and backfilling done by contract at \$1.10 a cubic yard. Remainder of work done by Water Department. Pipe lowered by means of curves to grade of new 20-inch line in Gates street with which it connects. A cut of about 13 feet was necessary and practically all new stock. A 20-inch gate valve with brick chamber is included in the cost and all the curves were set-screwed.

Sixteen Inches in Diameter.

141 feet laid at a total cost of \$4.01 a linear foot.

Conditions same as (b.) under "Thirty Inches."

Twelve Inches in Diameter.

- (a.) 175 feet laid at a total cost of \$1.43 a linear foot.
- (b.) 557 feet laid at a total cost of \$2.00 a linear foot.
- (c.) 3,050 feet laid at a total cost of \$2.60 a linear foot.
- (d.) 183 feet laid at a total cost of \$3.58 a linear foot.
- (e.) 795 feet laid at a total cost of \$4.27 a linear foot.

- (a.) Metropolitan Water Board furnished lead, gasket, wood and blocking and laid all the pipe.
- (b.) Department work composed of eight jobs of varying extent, where mains were raised, lowered, offsetted, or temporarily removed to allow of operations of Sewer Division. Old stock used in some cases, but in all cases special castings were necessary.
- (c.) Contract work under usual specifications. Some extras on account of unforeseen conditions. Solid rock encountered in one portion of work and broken rock of inconvenient size in another. The work practically same as laying new mains and typical of extension in the outlying sections, where soil conditions are composite.
- (d.) Conditions same as (b.) under "Thirty Inches."
- (e.) Department work where pipe was relocated to allow of construction and changes in bridge structures over which our mains run. Although there was not much digging aside from that at the abutments, nevertheless the difficult conditions and complications involved made the cost high. In three jobs aggregating 569 feet boxes had to be built covering the pipes. Including the fenders and painting these are expensive. Stonework was also necessary in the abutments.

Ten Inches in Diameter.

- (a.) 55 feet laid at a total cost of \$3.40 a linear foot.
- (b.) 103 feet laid at a total cost of \$3.58 a linear foot.
- (c.) 20 feet laid at a total cost of \$7.64 a linear foot.

- (a.) Department work done on account of sewer construction. Pipe had to be raised, removed and put back. Large proportion of special castings used.
- (b.) Contract work. Connections. Rock.
- (c.) Department work. Connections. High ratio of special castings used with consequently greater expense per foot.

Eight Inches in Diameter.

- (a.) 185 feet laid at a total cost of \$2.24 a linear foot.
- (b.) 90 feet laid at a total cost of \$3.77 a linear foot.

- (a.) Relocated on account of change in grade due to abolishment of grade crossing. Steam railroad track ran close to edge of

trench. Only small sections of trench could be opened at a time and would then have to be backfilled before another section could be opened. Much bracing was necessary.

(b.) Several small jobs of raising and offsetting on account of sewer construction.

Six Inches in Diameter.

68 feet laid at a total cost of \$3.02 a linear foot.

Several small jobs of offsetting, raising, etc.

Independent of main pipe work, the following gate valves, air valves and blow-offs were established on old mains at the costs stated.

Gate Valves.

3	16-inch, total cost	.	.	.	.	.	.	.	.	\$547	32
13	12 " "	.	.	.	.	.	.	.	.	1,232	41
1	10 " "	.	.	.	.	.	.	.	.	79	00
5	8 " "	.	.	.	.	.	.	.	.	355	39
4	6 " "	.	.	.	.	.	.	.	.	391	33
1	4 " "	.	.	.	.	.	.	.	.	56	24

Air Valves.

1	2-inch, total cost	.	.	.	.	.	.	.	.	\$26	17
2	1½ " "	.	.	.	.	.	.	.	.	62	14

Blow-Offs.

1	6-inch, total cost	.	.	.	.	.	.	.	.	\$101	31
3	4 " "	.	.	.	.	.	.	.	.	210	01

Blow-Offs Extended.

1	12-inch, total cost	.	.	.	.	.	.	.	.	\$193	11
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The following gate valves, air valves and blow-offs were abandoned in one location and established in another at the costs stated.

Gate Valves.

2	16-inch, total cost	.	.	.	.	.	.	.	.	\$323	02
2	12 " "	.	.	.	.	.	.	.	.	79	96
1	6 " "	.	.	.	.	.	.	.	.	79	45

Air Valves.

2	2-inch, total cost	.	.	.	.	.	.	.	.	\$35	40
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Blow-Offs.

1	6-inch, total cost	.	.	.	.	.	.	.	.	\$75	97
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The total cost of repairs and maintenance of main pipes for the year was \$22,161.75. This includes not only the cost of repairing leaks in the mains, but also the cost of inspecting and preventing leaks, and such work as "blowing

off" dead ends, thereby clearing the pipes of rust, sediment and other accumulations; marking the locations of gate valves; salting the covers of boxes inclosing gate valves, air valves and blow-offs when snow and ice covered the ground; testing, oiling, and otherwise inspecting gate valves, air valves and blow-offs; repairing, renewing and regulating the boxes, frames and covers for the same; inspecting openings and operations of other corporations and departments with the object of protecting our mains from injury or other detriment; repaving and repairing the streets where repairs had previously been made; in general, all work that was related to the efficiency and good condition of the main pipes. The above amount might be divided, however, as follows: \$11,445.37 representing the cost of repairing defects in the pipes and valves; \$7,233.09 representing the cost of repairs, renewals and regulations of the valve boxes and street repairs; and \$3,483.29 representing the cost of inspection, testing, marking, etc.

Exclusive of "Bad Water," which necessitated blowing off dead ends **351** times, "Defective Gates" was the most prevalent cause of trouble in the mains, there being **154** cases, mostly due to loose packing. "Leaking Joints" came next with **143** cases. "Settlement" next with **35** cases. "Broken" and "Burst" pipes next with **21** cases; these usually were due to imperfect castings or deterioration of the pipes, combined with fluctuating pressure and water ram, and as a rule proved to be the most serious in consequences. **Sixty-seven** cases were of miscellaneous causes. Altogether there were **769** defects repaired in the mains and valves; **1,382** box repairs, renewals, regulations and street repairs; and **11,762** marking, testing, oiling, salting and inspecting jobs.

Repairs in the main pipe system are yearly becoming more expensive for the same reason that the work in general of the distribution system is becoming more expensive, viz., the increasing congestion below and above the surface of the streets, and the increasing number of streets having asphalt, bitulithic, wooden block and granite block pavements laid upon a concrete base.

Water damage from leaks and breaks is also becoming a most important factor, due no doubt to the increasing tendency of the public towards litigation upon the slightest pretext. In former years it was only upon the occasion of extraordinary damage that a claim was made, but now it seems as if a great many people were awaiting an opportunity upon which to base a claim, and in estimating the amount of damages the tendency is decidedly towards overestimat-

ing rather than underestimating, with the excess ranging from 50 per cent upwards. It is therefore necessary in the event of a leak or break in the main or other fixture that the employees of the department be upon the scene at the earliest possible moment and shut off the water, thus minimizing the possible damage. Although the department is at present equipped in its central district with an emergency wagon and crew, on duty at all hours of the day and night, nevertheless, a bad break in any of the outlying districts, where only a watchman is at hand, would find it at a disadvantage. As a means of improvement in this important matter I would recommend the substitution of an automobile for the present horse-drawn wagon at the central yard in Albany street. With such a rapid means of conveyance the emergency crew at Albany street could arrive upon the ground in a very short time, and after working hours, or, for that matter, during any part of the day, when necessary, could cover the whole city without much trouble. This branch of the department to be of value must be conducted with regard to promptness, discipline and efficiency, and upon practically the same basis as the Fire Department.

Referring to the causes of leaks I find that many of the cases of "Leaking Joints" were due to vibration caused by the passage through the streets of the new type of semi-convertible trolley car, weighing about thirty tons. These extra heavy cars produce a jar that loosens the joint. Along the line of our cement pipe the effect is particularly injurious, the cement appearing to crack and disintegrate from the vibration. As this type of large and heavy car will probably increase in number throughout the city and eventually become general, a rather serious situation is before us. Some study should be given the question to determine the best manner of meeting it.

In the railroad yards at South Boston and Charlestown, where our pipes pass under the tracks, we are troubled with a considerable number of leaks, due also to vibration caused by the cars upon the tracks above. Either our pipes should be removed or else laid within a sheath or envelope consisting of a larger pipe. We have recently tried laying a flexible jointed pipe under a railroad track in Charlestown. It is the same pattern of pipe laid under water and we are observing the result with interest.

One of the most expensive jobs in connection with the maintenance of main pipes was the repairing and rebuilding of the boxes covering the 30-inch, 20-inch and 16-inch lines crossing the Charles river at Warren Bridge. These large

boxes were practically rebuilt with two-inch matched spruce and given two coats of paint to protect them from the weather. The pipes within were scraped and painted and all joints examined, and recalked where necessary. These three important lines of pipe, crossing the Charles river in the way they do, are one of the weakest parts of our system and are liable at any time to break. In such an event great inconvenience and danger from fire would result in that section of Charlestown situated on Charlestown Heights. Considerable difficulty would be involved in the repairs, and a great loss of water might result. A pipe tunnel will have to be built ere long from the Boston side to the Charlestown side of the river and the three lines of pipe placed therein. This is the only safe way to carry them across.

In the latter half of the year a system of gate inspection was started which, I think, will be productive of much good. A gang equipped for removing mud from the boxes precedes the inspection gang and makes the gates accessible. The inspection gang follows and tries the gate, oils it, packs it, when necessary, marks its distance from some convenient point, determines its function (whether main, service, fire, motor, elevator, or blow-off), records its exact location, and compares the data acquired with the plans of the system. A history card is then made out for each gate, containing information as to the size, location, function, etc., and provision is made for records of future inspections, repairs and changes. This will eventually give the department a complete card system of its gates, which will prove to be of great value. Furthermore, in a large department there is an almost continual manipulation of gates and it is not uncommon for the men sometimes to omit raising the gate they lowered. This, of course, is detrimental to the circulation. Again, division gates between the high and low service have been found open when they should have been shut, likewise, blow-off gates. These omissions are very serious and to prevent them the operations of the men should be followed up very closely and methods devised to make such negligence impossible. These matters will be attended to by the chief gate inspector, and I hope for good results therefrom.

The usual work of repairing and removing gate boxes, frames and covers has been carried on, and while it is well nigh impossible to escape repairing the frames and covers and altering the grade of the boxes, yet we hope through the substitution of concrete for wood to avoid the necessity of renewing decayed boxes, the expense of which is quite a factor in our maintenance account.

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BREAK IN 24-INCH MAIN, SOUTH STREET, NEAR JAMAICA STREET, JUNE 24, 1908.

Eighty petitions for main pipe to be laid in streets not previously supplied were investigated and measured, and in fifty-seven cases were granted and laid.

The cut facing this page shows a break in the 24-inch high service pipe in South street at Jamaica street, West Roxbury, June 24, 1908. Considerable damage resulted and, as may be seen, the trouble was due to the manner in which a manhole was built under and around our pipe. This was an especially wrong thing to do, but as in many other cases it was done and the inevitable happened. It may be said that good inspection, backed up by forceful protest, would prevent such work, but it is sometimes almost impossible with a limited number of inspectors to thoroughly cover every job progressing in close proximity to our pipes. Unfortunately, corporations and some city departments are very often concerned only about the completion of their work, regardless of the manner in which it affects the pipes and fixtures of this department.

HYDRANTS.

During the year 274 public and 6 private hydrants were established, and 192 public and 2 private hydrants were abandoned, making a total number of 7,919 public and 308 private and suburban hydrants connected with the system January 31, 1909. This work comprised not only the establishment of additional new hydrants, but also the changing of the style and location of old hydrants.

Following is a statement of the cost of hydrant work during the year:

Establishing 86 additional hydrants of different styles . . .	\$10,434 48
Changing style and location of 194 old hydrants . . .	16,868 59
Hydrants repaired on account of various defects . . . 516	5,802 80
Hydrant barrels changed for various reasons . . . 122	
Hydrant wastes renewed 20	
Hydrant boxes renewed 418	6,239 88
Hydrant boxes repaired 220	
Hydrant frames and covers renewed 95	
Hydrant inspections in cold weather 80,237	9,406 74
Hydrants oiled and tested 1,289	
Hydrants thawed out 140	
Hydrant boxes pumped and cleaned of mud and water 1,727	
Hydrant boxes hayed in cold weather 124	
Hydrants painted 5,316	1,694 11
Hydrants equipped with 4½-inch nozzles 27	87 61

Hydrant caps changed from old style to new	.	.	299	}	\$502 30
Hydrant caps fitted with washers, 2½-inch	.	.	1,548		
Hydrant caps fitted with washers, 4½-inch	.	.	1,796		

From the foregoing it may readily be seen that the hydrants are quite an expense to the department. In laying main pipe it is always necessary to provide for the maximum hydrant requirement. If that were unnecessary, mains of much smaller diameter would suffice. Hence, at least one-half of the expense of laying main pipe may properly be charged to hydrant service. Formerly the Fire Department paid the Water Department a certain sum yearly for each hydrant. It was supposed to cover the expense of the hydrant and its maintenance, and pay for the water used at fires. No payments have been made for the last ten years, however, and as a result, the Water Department, supported by a special tax, has been contributing in a large measure towards the maintenance of a department whose entire support should come from the general tax levy. This is clearly wrong.

There are five different styles of hydrants in use in the department, viz.: the Lowry, Boston Lowry, ordinary post, Boston post and Boston.

The Lowry is a hydrant the barrel of which is entirely underground and set directly upon the main. Connection is made with it by means of a chuck. The diameter of the barrel is 9 inches and the diameter of the valve is 6½ inches. It is a very efficient hydrant so far as delivering water is concerned, especially when it sets upon a four-way branch of large waterway. The objectionable feature about it is the delay occasioned by applying the chuck and the care necessary in the winter season to keep the cover free from snow and ice. During the past year the department purchased and delivered to the engine houses throughout the city 2,527 sacks of coarse salt, which was used by the firemen for that purpose. This style of hydrant is not being established in the outlying sections of the city, or in any place where the sidewalk is wide enough to accommodate a post hydrant. It is therefore confined largely to the business section of the city. At the present time 2,097 public and 31 private and suburban Lowrys are connected with the system.

The Boston Lowry is similar to the Lowry inasmuch as it sets entirely underground and requires a chuck as the medium of connection with a fire engine. The barrel, however, is only 5½ inches in diameter and the valve is 4 inches. It is usually set on the ends of mains and in sidewalks too

narrow for a post hydrant. At the present time 802 public and 6 private and suburban Boston Lowrys are connected with the system.

The ordinary post hydrant is the first type of post hydrant used by the department. It is set in the sidewalk and does not require a chuck for connection, it having one $4\frac{1}{2}$ -inch steamer connection, and two $2\frac{1}{2}$ -inch hose connections. It has but one valve, however, and this necessitates shutting off the supply when a second engine is to be connected. The barrel is 6 inches in diameter and the valve 5 inches. It is being replaced as rapidly as practicable by the improved type of post hydrant called the Boston post. At present there are 3,024 public and 138 private and suburban ordinary posts connected with the system.

The Boston post is the latest and most efficient type of post hydrant now in use by the department. It is a development and improvement of the Bachelder post. It has two $4\frac{1}{2}$ -inch steamer connections and one $2\frac{1}{2}$ -inch hose connection, all controlled by valves independent of the main valve which allows the water to enter the barrel from the main. The barrel is $7\frac{1}{4}$ inches in diameter, and the main valve 6 inches. The valves controlling the nozzles are of the "gate" or "slide" type and occupy a minimum amount of space, thus giving a correspondingly free waterway and facilitating the delivery of a large volume of water,—estimated to be about 2,500 gallons a minute under favorable conditions. The department feels that it has in this type of hydrant one that is as good if not better than any used in the large cities of the country. There are at the present time 1,745 public and 16 private and suburban Boston post hydrants connected with the system.

The Boston hydrant is an obsolete type, used years ago to a great extent, but now being abandoned wherever the opportunity presents itself. It is set entirely underground, usually in the sidewalk and allows of the connection of a $2\frac{1}{2}$ -inch hose. At the present time it is not to be thought of as a fire-fighting fixture. Many of them are used as private means of supply to steamers along the wharves. There are now 251 public and 117 private and suburban Boston hydrants connected with the system.

All the hydrants are set in wells surrounded by wooden or concrete boxes, and are equipped with automatic wastes.

As reference to the section headed "Shop Work" will show, the department manufactures all the hydrants now used.

While upon the subject of hydrants I wish to call your attention to a very serious matter which before long will have

to be dealt with in a firm and decisive manner, viz., the abuse of hydrants by careless and ignorant operators. As you no doubt know, hydrants are primarily a fixture for the use of the Fire Department, and their value as such depends upon their readiness for use, which, in turn, is dependent upon their working order. Now it is an almost hopeless task to keep hydrants in a good mechanical condition while they are being operated by "anybody and everybody." Our hydrants, in common with the rest of our fixtures, open to the right or exactly opposite to the direction in which most mechanical devices unscrew. The ignorant operator in his vain endeavor to open to the left applies all kinds of force with the frequent result that before he realizes that he is turning the screw the wrong way it is strained, bent or broken, and the valve packing below is crushed into a useless mass. Again, when he cannot secure the wrench that is made for the hydrant, he uses a Stillson wrench or some crudely made device that will do the work after a fashion. The result of this is to wear off the corners of the pentagon shaped valve nut, and when the regular socket wrench used by the Fire Department is applied there is nothing to hold it and it revolves around the nut without having any effect upon the valve. It can easily be imagined what a serious state of affairs this might cause at the start of a fire. Helpless to stay its progress because of lack of water, the firemen would have to view the development of a conflagration, perhaps. Again, very few of these ignorant and careless men, who act without authority in many cases and without knowledge in every case, understand that there is a waste in the hydrant that will not operate unless a means is provided for the entrance of the air by leaving the nozzles open while the water is draining out of the barrel. Upon shutting off the main valve they immediately close the independent or nozzle valve and thus trap the water in the barrel; or, worse still, some do not close the main valve at all, but leave the pressure in the hydrant up to the nozzle valves. It is not difficult to realize how in cold weather a frozen hydrant will result from these conditions, and a frozen hydrant is not a trifling matter in the event of a fire.

I am of the opinion that hydrants should be operated exclusively by the Fire and Water Departments, and other departments and contractors should secure their water through other means. The police should be called into the matter to assist in the enforcement of the regulations.

Tables III. and IV. appended show the number of each style of hydrant established and abandoned during the year, the districts in which they are located, and the total numbers in the system January 31, 1909.

SERVICE PIPES.

Twelve hundred and twenty-seven service pipes, of diameters varying from $\frac{5}{8}$ -inch to 10-inch, were laid during the year, and 229 were abandoned. The net increase for the year was 998. The total number of services in the system is **95,045**. The term "service pipe" includes not only those pipes supplying water to premises for strictly domestic purposes but also fire, motor and elevator pipes. Tables V. and VI. appended give details as to number, size, length in feet, etc. All $\frac{5}{8}$ -inch service pipes are made of lead. Those ranging from $\frac{3}{4}$ -inch to 2-inch, inclusive, are made of lead, and lead-lined iron. Pipes of 3 inches and upwards in diameter are cast iron.

The total cost of laying the different sized pipes was as follows:

1	10-inch with a total length of	24 feet	.	.	.	\$154	77
4	8-inch with a total length of	99 feet	.	.	.	325	71
4	6-inch with a total length of	50 feet	.	.	.	360	63
23	4-inch with a total length of	346 feet	.	.	.	2,219	34
29	3-inch with a total length of	639 feet	.	.	.	2,658	68
19	2-inch with a total length of	377 feet	.	.	.	1,093	30
36	1 $\frac{1}{2}$ -inch with a total length of	642 feet	.	.	.	1,398	60
19	1 $\frac{1}{4}$ -inch with a total length of	513 feet	.	.	.	700	26
62	1-inch with a total length of	1,406 feet	.	.	.	1,693	12
36	$\frac{3}{4}$ -inch with a total length of	1,484 feet	.	.	.	1,097	97
994	$\frac{5}{8}$ -inch with a total length of	21,558 feet	.	.	.	17,330	17
1,227		27,138				\$29,032	55

The foregoing costs include not only the laying of pipes to new buildings but also the replacement of pipes of smaller sizes to old buildings. In the latter class there is the additional cost of plugging the abandoned pipes. Blasting and repaving were factors in many of the jobs and swelled the costs accordingly. In regard to repaving, this is annually becoming a more expensive item on account of the increasing use of expensive pavements like wooden block, asphalt, bitulithic and granite blocks with pitch and pebble joints. When, in conformance to the new meter law, meters will be attached to all new services, as well as to the old ones, the cost of laying a service pipe will be further increased. We have recently found it necessary in expensively paved streets to set over the corporation cocks, iron frames and covers that show in the surface of the street and allow of the operation of the cock without the necessity of disturbing the pavement. These covers are especially desirable on service pipes too small for gate valves and too large for sidewalk cocks.

The demand for larger service pipes is yearly increasing, due no doubt to the requirements of modern plumbing, the

erection of larger buildings, and the installation of the automatic sprinkler system of fire protection. The extension of the high service is a resultant of these new phases and, whereas a few years ago the high service system was somewhat limited in its scope, it will not be long before it is extended throughout the greater part of the city. Provision for a larger supply to meet this situation will soon have to be made. Fisher Hill Reservoir, the only distributing basin for the high service of the city (East Boston excepted), has a capacity of only 15,500,000 gallons, which would supply the city but a very short time in the event of a breakdown in the pumping machinery at Chestnut Hill, or serious defects occurring in the force mains between the pumps and Fisher Hill. A site for a storage reservoir of large capacity should be selected at once, preferably in the West Roxbury district upon a sufficiently high elevation.

In the consideration of applications for larger service pipes I would suggest that the size granted be as small as practicable and an effort made to compel builders and building owners to install plumbing of a sufficiently large size. There is a growing tendency on the part of the public to require the Water Department to compensate for the loss of head due to small sized pipes inside of buildings by the laying of large sized pipes outside. Although the large sized service pipes are paid for, yet they add to the expense of the department through increased cost of maintenance, the necessity of a larger meter, and the liability of greater water damage in the event of a leak.

The maintenance of service pipes is an item of considerable importance and expense. During the year 17,369 repair and maintenance jobs were performed at a total cost of \$15,178.28; 754 investigations were made, where it was found that the department was not required to do any work, at a total cost of \$1,907.27; and 1,127 inspections of street openings, and the repaving of them by outside parties, were made at a total cost of \$866.51. Considerable portion of the "repair and maintenance" work referred to was of a trivial nature, such as, for instance, driving down a sidewalk upright to grade, which is usually accomplished by a few blows of a rammer. To afford you an idea of the chief causes of trouble in the service pipe system, I shall mention the following:

	Total Number During the Year.
Sidewalk uprights above or below grade	13,379
Pavements repaved or repaired where they were opened on account of service pipe	1,169
Service pipes shut off and let on to allow of repairs by owners	748

	Total Number During the Year.
Stoppage due to rust and dirt	543
Leaks due to settlement of earth	281
Leaks due to defective pipes	275
Sidewalk uprights repaired	222
Sidewalk uprights renewed	157
Sidewalk cocks renewed	83
Defective couplings	54
Operations of city departments, corporations and contractors	52
Struck by pick	50
Natural frost	46
Main uprights renewed	35
Defective joints	30
Electrolytic action	25
(and numerous others.)	

Leaky service pipes are a most important factor in the excessive waste of water throughout the system. Many of them are pipes that formerly supplied buildings which do not now exist. They might have been shut off at the sidewalk cock, or, as in many cases, they might simply have been "hammered up." At any rate, some time afterward they started leaking and it is only by accident that the leak was discovered. We hope, however, with the aid of the Deacon Meter System to discover and stop all such cases. Another cause for waste, and also possible damage, is the leaking of services that were laid a few years ago under statute requirements to vacant lots. In one street during the past year eleven of such pipes were found leaking, several of which were running full head. The law requiring the laying of service pipes to vacant lots is not now in force but, unfortunately, there are hundreds of such pipes in the system. I shall endeavor during the coming year to shut off at the main all such pipes. It will be a somewhat extensive job, as in each case it will be necessary to dig down to the main upright, but I think it will pay in the end.

WATER POSTS.

During the year four water posts for street sprinkling carts were established and five abandoned, leaving a total number of 519 connected with the system January 31, 1909. The total cost of the work was \$144.93, which was charged to the Street Watering Department. At the request of said department the following work was done:

Water posts shut off and let on during cold weather	161	} Total Cost. \$1,692 63
Water post repairs of miscellaneous kind, chiefly defective valves and cocks	374	

Formerly the Water Department assumed full charge of these posts, but in 1906 the Street Watering Department took the care of them, and since then we do nothing towards their maintenance, except upon orders from that department. Aside from the painting of the posts and their equipment with hose, the principal care is that of keeping them from freezing during the changeable weather of the early spring and late fall. At such times it is necessary to shut them off at night and turn them on the following morning. Early last spring the Street Watering Department was deceived by some balmy weather and allowed the posts to remain turned on one night, when a sudden drop in the temperature occurred and the result was that about every post in the city was more or less damaged by frost. This accounts in a great measure for the high total cost of repairs for the year.

FOUNTAINS.

During the year three new drinking fountains were established: one for beasts in King square, Dorchester; one for beasts at junction of Saratoga and Bennington streets, East Boston; and one for humans at the Orient Heights railroad station, East Boston. Two fountains were relocated and four fountains were abandoned. The total number now controlled by the department is 106. For the different styles and locations by districts, see Table VII. appended.

The total cost of the work of establishing the three new fountains was \$696.43; and that of relocating two fountains was \$247.12. The work of abandoning four fountains shows a credit balance inasmuch as the fixtures were recovered and are now in stock fit to be re-established should it be deemed expedient. Their value exceeds the cost of taking them out of service.

The playing fountain in service in the Frog pond, Boston Common, ever since 1848, when Cochituate water was first turned into the distribution pipes of Boston, and which was changed into an electrical fountain during the summer of 1907, was restored to its original form at a cost of \$277.44. During its service as an electrical fountain it was connected with the 16-inch high service main, but as it was not considered desirable to have it off this valuable and somewhat limited service, the connection was removed and the fountain supplied from the low service. The nozzles that produced jets of varied form were repaired, and a concrete tunnel wherein the electrical fountain was operated was demolished. Stepping stones of concrete were set in the pond to allow of a foot pas-

sage from the shore to the fountain, and the fountain itself was moved out nearer to the center of the pond. A hydrant that served to supply the Frog pond, and indirectly the pond in the Public Garden, and which was established to replace the original fountain in its function as a supply while the electrical fountain was in existence, was abandoned and its connections removed.

In the work of maintaining the fountains 110 repair jobs were performed, and the drinking troughs for horses were inspected and cleaned 2,318 times at a total cost of \$3,090.56. During the summer season 1,168 tons of ice, costing \$3,504, were purchased of and delivered by the Boston and Hygeia Ice Companies to the cold water fountains, and an inspection of the same made by the department.

From the manner in which the cold water fountains are treated by certain members of the community, their maintenance appears to be a thankless task. The self-closing cocks are stolen and most maliciously damaged. The dippers and chains are also stolen and in some cases the basin part of the fountains is made the receptacle for all kinds of unmentionable filth. The ice is stolen from the boxes and it seems to be a hopeless toil to keep the fountains in a condition to be of service to worthy people. Children gather around these fountains and play with the water in such a manner as to make it a matter of risking one's clothes and dignity to approach sufficiently near to drink.

In a similar manner the old style of drinking troughs for horses are abused. The water in them is so polluted by the introduction of foreign matter that it is really inhuman to allow an animal to drink of it. Not only are sticks, stones, tin cans, etc., thrown in, but overalls and other articles of clothing are washed therein, and it is not uncommon to see them used as footbaths. In a few cases young children have been entirely immersed in the water.

All this is most discouraging, and I recommend that as far as the horse troughs are concerned the old style of low stone trough be done away with wherever practicable and replaced by the high circular bowl that sets to advantage in the center of squares and intersecting streets. Children are not so much inclined to play about this kind of fountain; there is a constant flow that insures pure water; and they are of such a height that a horse can drink without being unchecked. This last feature is most important, as a great many drivers refuse to water their horses rather than get down off their seats to uncheck them.

Another matter that requires attention is the rearrange-

ment and relocation of the fountains in the city. In the past many of them were erected at the request of members of the City Council in locations that ignored the lines of traffic and the general distribution of the fountains with a view of serving the requirements of the city as a whole and in the most economical and efficient manner. The local phase only of the matter was considered, and it was extremely local at that. In establishing drinking fountains points of vantage should be selected that would intercept the flow of travel. In such manner a few fountains would do the work of many located indifferently.

WASTE DETECTION.

The daily average per capita consumption having reached the very high figure of 158 gallons, an earnest effort was made to operate the Deacon System of Waste Detection, with the object of lessening that figure if possible. The daily average consumption in that part of the West Roxbury district supplied by the "extra high," or Mt. Bellevue tank, service having increased from 459,700 gallons in January, 1908, to 698,000 gallons in September of the same year, and the night rate, or waste, having increased within the same period of time from 213,000 gallons to 435,000 gallons daily, our attention was directed to that district. Tests were made that showed the waste to be almost entirely on the inside of premises, the only outside leak found and repaired by the department being in a $\frac{5}{8}$ -inch service pipe at No. 87 Bellevue street, where the pipe was found badly split and wasting at the rate of 1,500 gallons hourly. Those streets in which it was found that waste was going on within the premises were inspected by the waste department of the Income Division, and after considerable work the daily average consumption was brought down in November to 446,000 gallons, and the night rate, or waste, reduced to 222,000 gallons. Cold weather having set in efforts to further reduce the waste had to be deferred until spring, when we hope to eliminate the remainder.

In the East Boston district the Deacon System was operated in November but, beyond an excessive rate of waste throughout the district, nothing more than a start was made to locate the exact points of leakage. In the short time in which we were engaged, we located a $\frac{1}{2}$ -inch service pipe, in Belmont court, which had been shut off at the sidewalk cock years ago, instead of being plugged at the main. It was found broken at a point about two feet from the main and had been wasting continuously at the rate of about

700 gallons per hour. We also found and repaired a bad leak in a service pipe at No. 111 Everett street, amounting to 600 gallons per hour; and upon Staples wharf, near the North Ferry, an old pipe which ran the entire length of the wharf was found badly split and was wasting into the harbor at the rate of about 10,000 gallons hourly. This pipe was disconnected and abandoned by the owners of the wharf.

During the coming spring and summer the Deacon System will be operated in a manner which, I hope, will produce telling results and reduce the rate of waste to a more reasonable figure. This will be impossible, however, unless the indications of the meter are followed by a thorough and adequate inspection by the Income Division. This inspection to be of value must not only discover leaks within premises but also enforce the repairing of the same.

The number of Deacon meters in the different sections of Boston that are set and can be operated at will are:

City Proper	26
East Boston	7
South Boston	13
Charlestown	4
Roxbury	14
Dorchester	7
West Roxbury	4
Brighton	2
Total	77

In addition there are:

Meter at yard to be set in Harvard street, City Proper	1
Meters set at Long and Deer Islands to be cut out and reset in West Roxbury	2
New meters in yard	3
Meter pot destroyed at the time of New York, New Haven & Hartford Railroad work in Castle street, making the internal machine useless	1
Meter set at Pearl and Medford streets, Charlestown, but useless at this point owing to high service extensions	1
Total	8

ELECTROLYSIS.

This is a factor of growing importance in the distribution systems of all large cities. No practical means has yet been devised that will thoroughly insulate water pipes from the electric current that flows underground. Investigation, experimentation and data collected from various sources have given us considerable knowledge about the tendencies and effects of current flowing on and off water pipes, but, like many other questions regarding electricity, we are still quite in the dark. One thing is certain,—a considerable amount

of electricity is flowing on and off our pipes, and in all cases where the latter condition obtains injurious effect of varying extent results.

The subject is receiving the attention of the water departments of large cities and with the assistance of expert knowledge some definite means of overcoming the trouble will no doubt be acquired. In the meantime this department has one investigator constantly employed, and another irregularly, making tests and gathering valuable data. Testing stations are established at points where by reason of previous tests it is known that current is flowing in quantity and potential of dangerous proportions, and readings are taken regularly. We are thus informed as to changes in conditions and are enabled to govern ourselves accordingly.

We are now experimenting with a sheath device attached to service pipes, consisting of a section of iron pipe about 4 feet long and of larger diameter than the service pipe which it envelops. It is connected with the service pipe at both ends by means of copper wire and it is placed around that part of the service passing closely under or over an electrical or other conduit which might have a tendency to attract any current that the service pipe is carrying. Where the sheath is thus attached the presumption is that the current will leave the lead pipe by means of the copper connecting wires and flow into the iron pipe and thence to the conduit, thus making the point of departure occur in the iron pipe instead of the lead pipe. As electrolysis occurs at that point the service pipe is thereby saved and the iron pipe sustains the damage. The locations of service pipes thus equipped are recorded, and in due time examinations will be made and any changes in the condition of either the pipe or sheath will be noted.

SHOP WORK.

The Distribution Division has seven shops, viz., machine, blacksmith, carpenter, paint, plumbing, pattern and concrete box shops. These shops are so involved with each other, in a considerable amount of work performed, that they will have to be treated accordingly. Other work, peculiar to certain of the shops, will be accounted for separately.

The power necessary to operate the machinery in the machine, blacksmith, carpenter and pattern shops, and also the two elevators and the yard saw, is furnished by two horizontal tubular boilers and one Brown single cylinder engine. The maximum possible horse power of the plant is approximately eighty, but the actual horse power developed is

twenty-seven, which is all that is necessary. One engineman and a fireman are in attendance six days in the week except in cold weather, when an additional fireman is employed to attend the boilers during the night when steam is maintained for heating purposes.

A considerable saving in the amount of coal used has been effected during the past year over that of the year previous. This is due to a combination of conditions, viz., a lesser number of firemen employed, better firing, good quality of coal, and the burning of refuse material, sawdust, etc. During the year 1907-08 671,200 pounds of coal were burned, with a percentage of 13.5 ash and clinker. During 1908-09 497,000 pounds of coal were burned, with a percentage of 10 ash and clinker.

Some improvements have been made in the construction of gate valves manufactured by the machine shop. Those ranging from 3 inches to 16 inches, inclusive, in size, are now made with solid bodies, and a saving in labor, lead, bolts and cast iron results. The bolt holes in the flanges of gates up to 16 inches and also those in post hydrants are now cast, thus saving the labor of drilling them. The rings or valve seats are screwed into the small gates and expanded in those of 10 inches and larger. The nozzles of the post hydrants instead of being "leaded" into the outlets are now screwed into the solid metal, the inside face of which forms a seat for the independent valves.

In the following statement of manufactures and repairs in the machine shop the cost per article includes not only the direct labor cost plus the cost of material but also an additional 70 per cent on the direct labor cost, which is considered a proper addition for contingent expenses, such as administration costs, supervision, power, tools, tool repairs, holidays, maintenance of shop, supplies, etc. It corresponds to what a business house would add before deciding upon a selling price for its manufactured articles. The direct labor cost includes only the labor of the machinist who does the actual work of converting the rough casting into a finished part and assembling the parts into a complete article.

**STATEMENT OF STOCK MANUFACTURED FROM THE ROUGH DURING
THE YEAR IN THE MACHINE SHOP.**

ARTICLE.	Number.	Cost Each.	Total Cost.
3-inch gate valves.....	9	\$12 34	\$111 06
3-inch gate valves for blow-off.....	7	13 29	93 03
4-inch gate valves.....	6	15 39	92 34
6-inch gate valves.....	47	21 98	1,033 06
8-inch gate valves.....	102	29 64	3,023 28
10-inch gate valves.....	17	49 09	834 53
12-inch gate valves.....	73	56 71	4,139 83
16-inch gate valves.....	8	102 24	817 92
24-inch gate valves.....	3	313 97	941 91
Boston post hydrants.....	169	48 42	8,182 98
Bachelder post hydrants, I valve.....	37	51 17	1,893 29
Bachelder post hydrants, C valve.....	11	53 15	584 65
Lowry hydrants, 3 feet 3 inches.....	9	27 22	244 98
Lowry hydrants, 3 feet 6 inches.....	11	27 72	304 92
Lowry hydrants, 3 feet 9 inches.....	9	28 07	252 63
Lowry hydrants, 4 feet.....	11	28 57	314 27
Lowry hydrants, 4 feet 3 inches.....	7	28 83	201 81
Lowry hydrants, 4 feet 6 inches.....	5	29 36	146 80
Lowry hydrants, 4 feet 9 inches.....	9	29 89	269 01
Lowry hydrants, 5 feet 3 inches.....	2	30 39	60 78
Lowry hydrants, 5 feet 9 inches.....	3	31 78	95 34
1½-inch air cock.....	8	5 03	40 24
2-inch air cock.....	12	7 11	85 32
¾-inch sidewalk cocks.....	1,296	72	933 12
¾-inch sidewalk cocks, special.....	10	77	7 70
1-inch sidewalk cocks.....	42	1 51	63 42
½-inch corporation cocks.....	27	70	18 90
¾-inch corporation cocks.....	1,391	76	1,057 16
¾-inch corporation cocks, special.....	10	79	7 90
¾-inch corporation angle cocks.....	157	76	119 32
¾-inch corporation cocks.....	99	1 28	126 72
1-inch corporation cocks.....	226	1 55	350 30
1½-inch corporation cocks.....	76	2 99	227 24
1½-inch corporation cocks, special.....	1	3 82	3 82
1½-inch water post cocks.....	17	2 66	45 22
<i>Carried forward.....</i>			\$26,724 80

STATEMENT OF STOCK MANUFACTURED FROM THE ROUGH DURING
THE YEAR IN THE MACHINE SHOP.—*Continued.*

ARTICLE.	Number.	Cost Each.	Total Cost.
<i>Brought forward</i>			\$26,724 80
2-inch hose couplings.....	50	\$0 55	27 50
$\frac{3}{4}$ -inch combination couplings.....	141	33	46 53
1-inch combination couplings.....	136	48	65 28
1 $\frac{1}{2}$ -inch combination couplings.....	50	96	48 00
2-inch combination couplings.....	100	1 16	116 00
1-inch combination bent couplings.....	6	79	4 74
2-inch combination bent couplings.....	27	1 44	38 88
3-inch female hose couplings.....	9	1 09	9 81
$\frac{5}{8}$ -inch coupling nuts.....	554	057	31 58
$\frac{3}{4}$ -inch coupling nuts.....	700	095	66 50
1-inch coupling nuts.....	664	17	112 88
1 $\frac{1}{2}$ -inch coupling nuts.....	50	30	15 00
2-inch coupling nuts.....	125	42	52 50
$\frac{5}{8}$ -inch coupling tubes.....	62	055	3 41
$\frac{3}{4}$ -inch coupling tubes.....	186	105	19 53
1-inch coupling tubes.....	100	14	14 00
1 $\frac{1}{2}$ -inch coupling tubes.....	50	275	13 75
1-inch bent tubes.....	6	42	2 52
$\frac{1}{2}$ -inch male coupling.....	90	125	11 25
$\frac{5}{8}$ -inch male coupling.....	483	11	53 13
$\frac{3}{4}$ -inch male coupling.....	184	205	37 72
1-inch male coupling.....	155	235	36 43
$\frac{5}{8}$ -inch meter nipples.....	297	16	47 52
$\frac{3}{4}$ -inch meter nipples.....	100	24	24 00
1 $\frac{1}{2}$ -inch meter nipples.....	99	34	33 66
1 $\frac{1}{2}$ -inch meter nipples, special.....	12	46	5 52
2-inch meter nipples.....	40	55	22 00
$\frac{3}{4}$ -inch solder nipples.....	115	12	13 80
2-inch solder nipples.....	150	50	75 00
Nipples for Doherty cocks.....	41	15	6 15
Nuts for Doherty cocks.....	33	135	4 46
1-inch by $\frac{3}{4}$ -inch meter bushings.....	12	18	2 16
1-inch meter bushings.....	100	27	27 00
$\frac{3}{4}$ -inch by $\frac{5}{8}$ -inch meter reducers.....	60	16	9 60
2 $\frac{1}{2}$ -inch by 2-inch reducers.....	6	1 31	7 86
<i>Carried forward</i>			\$27,830 47

STATEMENT OF STOCK MANUFACTURED FROM THE ROUGH DURING
THE YEAR IN THE MACHINE SHOP.—*Concluded.*

ARTICLE.	Number.	Cost Each.	Total Cost.
<i>Brought forward</i> .....	.....	.....	\$27,830 47
$\frac{5}{8}$ -inch iron plugs.....	401	\$0 13	52 13
$\frac{7}{8}$ -inch set screws.....	4,420	13	574 60
1-inch set screws.....	187	49	91 63
Post hydrant bolts.....	937	29	271 73
Lowry hydrant bolts.....	197	29	58 13
Boston Lowry hydrant bolts.....	127	45	57 15
Post hydrant extension bolts.....	53	59	31 27
Lowry hydrant extension bolts.....	31	54	16 74
Air cock bolts.....	44	57	25 08
Puddling head bolts.....	26	75	19 50
$\frac{7}{8}$ -inch eye bolts.....	12	53	6 36
Fountain bolts.....	40	32	12 80
Fountain rings.....	540	02	10 80
Sidewalk uprights.....	1,168	54	630 72
Gate pins.....	2,496	015	37 44
Acorn nuts.....	18	08	1 44
$\frac{3}{16}$ -inch screws.....	164	034	5 58
Hydrant wastes.....	348	52	180 96
Hydrant pump couplings.....	13	42	5 46
4-inch jointers.....	5	91	4 55
6-inch jointers.....	8	1 06	8 48
8-inch jointers.....	8	1 17	9 36
10-inch jointers.....	2	1 34	2 68
12-inch jointers.....	2	1 67	3 34
16-inch jointers.....	1	2 02	2 02
20-inch jointers.....	1	2 37	2 37
Total.....	.....	.....	\$29,952 79

STATEMENT OF STOCK REPAIRED AND RENOVATED DURING THE YEAR
IN THE MACHINE SHOP.

ARTICLE.	Number.	Cost Each.	Total Cost.
3-inch gates.....	2	\$1 81	\$3 62
4-inch gates.....	3	2 66	7 98
6-inch gates.....	18	2 66	47 88
8-inch gates.....	2	4 26	8 52
10-inch gates.....	2	9 74	19 48
12-inch gates.....	5	4 92	24 60
Boston post hydrants.....	1	7 37	7 37
Bachelor post hydrants.....	19	6 52	123 88
Post hydrants.....	45	5 60	252 00
Lowry hydrants.....	45	2 78	125 10
Boston Lowry hydrants.....	42	2 14	89 88
$\frac{5}{8}$ -inch sidewalk cocks.....	64	17	10 88
$\frac{3}{4}$ -inch sidewalk cocks.....	2	17	34
$\frac{1}{2}$ -inch corporation cocks.....	11	12	1 32
$\frac{5}{8}$ -inch corporation cocks.....	246	10	24 60
$\frac{3}{4}$ -inch corporation cocks.....	10	12	1 20
1-inch corporation cocks.....	13	10	1 30
1 $\frac{1}{4}$ -inch corporation cocks.....	3	12	36
1 $\frac{1}{2}$ -inch corporation cocks.....	4	15	60
$\frac{5}{8}$ -inch angle cocks.....	24	14	3 36
2-inch hose couplings.....	19	14	2 66
1 $\frac{1}{2}$ -inch puddling head cocks.....	14	19	2 66
$\frac{5}{8}$ -inch coupling nuts.....	1,262	007	8 83
$\frac{3}{4}$ -inch coupling nuts.....	26	007	18
1-inch coupling nuts.....	77	0085	65
1 $\frac{1}{2}$ -inch coupling nuts.....	26	0085	22
2-inch coupling nuts.....	9	0085	08
$\frac{1}{2}$ -inch coupling tubes.....	18	007	13
$\frac{5}{8}$ -inch coupling tubes.....	998	007	6 99
$\frac{3}{4}$ -inch coupling tubes.....	19	0085	16
1-inch coupling tubes.....	32	0085	27
1 $\frac{1}{2}$ -inch coupling tubes.....	20	017	34
2-inch coupling tubes.....	15	017	26
$\frac{5}{8}$ -inch male couplings.....	34	0085	29
$\frac{3}{4}$ -inch male couplings.....	3	0085	03
Carried forward.....			\$778 02

STATEMENT OF STOCK REPAIRED AND RENOVATED DURING THE YEAR
IN THE MACHINE SHOP.— *Concluded.*

ARTICLE.	Number.	Cost Each.	Total Cost.
<i>Brought forward</i>			\$778 02
1-inch male couplings.....	6	\$0 017	10
1½-inch male couplings.....	3	017	05
2-inch male couplings.....	1	017	02
1½-inch solder nipples.....	8	07	56
2-inch solder nipples.....	8	07	56
Post hydrant bolts.....	12	05	60
Lowry hydrant bolts.....	18	03	54
Boston Lowry hydrant bolts.....	9	03	27
Post hydrant extension bolts.....	2	12	24
Lowry hydrant extension bolts.....	4	12	48
Hydrant wastes.....	130	07	9 10
1-inch set screws.....	5	085	43
10-inch jointers.....	1	48	48
12-inch jointers.....	2	48	96
Total.....			\$792 41

STATEMENT OF STOCK MANUFACTURED DURING THE YEAR IN THE
CARPENTER SHOP.

	Total Cost.
386 small wooden boxes for gate valves, at \$3.80	\$1,466 80
48 large wooden boxes for gate valves, at \$4.72	226 56
338 wooden boxes for post hydrants, at \$4.91	1,659 58
36 wooden boxes for Lowry hydrants, at \$4.46	160 56
60 wooden boxes for Boston Lowry hydrants, at \$6.07	364 20
24 wooden boxes for Boston hydrants, at \$4.18	100 32
12 wooden boxes for Deacon meters, at \$4.72	56 64
162 tops for small wooden gate-valve boxes, at 50 cents.	81 00
12 tops for large wooden gate-valve boxes, at 56 cents	6 72
74 tops for post hydrant boxes, at 61 cents	45 14
48 tops for Lowry hydrant boxes, at 61 cents	29 28
18 tops for Boston hydrant boxes, at 56 cents	10 08
2,584 inches in pieces for raising gate-valve boxes, at 9 cents	232 56
2,671 inches in pieces for raising hydrant boxes, at 10 cents	267 10
81 wooden horses, at 62 cents	50 22
39 6-inch diameter wooden plugs	20 64
200 2-inch diameter wooden plugs	13 25
640 wooden wedges for concrete boxes	3 61
4 post hydrant frames	5 60
20 wooden stoppers for oil cans	1 62
2,110 wooden wedges for main pipe work	35 67
100 wooden chocks for main pipe work	2 83
1,211 wooden paving blocks	27 38
Total	<u>\$4,867 36</u>

NOTE.— In the above costs 20 per cent is added to labor cost to cover contingent expense.

STATEMENT OF STOCK MANUFACTURED DURING THE YEAR IN CONCRETE
BOX PLANT.

	Total Cost.
319 small concrete gate-valve boxes (1 $\frac{3}{4}$ inches), at \$6.85 . . .	\$2,183 80
424 concrete post hydrant boxes (1 $\frac{3}{4}$ inches), at \$7.06 . . .	183 52
72 concrete meter boxes (1 $\frac{1}{4}$ inches), at \$6.64 . . .	478 02
9 concrete blocks for stepping stones in Frog pond, at \$1.37 . . .	12 33
Total	<u>\$2,857 67</u>

STATEMENT OF GENERAL WORK PERFORMED BY ALL THE SHOPS DURING
THE YEAR.

	Total Cost.
Repairs in and around the stables	\$2,106 21
Tool repairs of all kinds	2,006 66
Repairs and renovation of Albany street yard, including erection of concrete box shed	1,644 12
New tools made, 689	1,539 02
Repairs in and around the shops	1,393 25
Sharpened 13,068 picks, 2,184 bars and 4,284 chisels	1,139 20
Repairs and renovation of Dorchester yard	970 03
Patterns made, 71	903 90
Repairs and miscellaneous work at reservoirs	732 23
Repairs and renovation of Charlestown yard	656 66
Wagons and carriages repaired and painted	601 91
Odd jobs for Engineering Department	575 86
Work done for Water Commissioner's office	341 56
Patterns repaired and renovated	222 08
Accommodation work for outsiders	96 99
Repairs at East Boston yard	85 72
Work done at Mt. Bellevue tank, West Roxbury	72 06
Pipes, caps, curves and branches drilled in yard	56 75
Made 13 sealing covers for division gate valves	38 76
Work done at Orient Heights tank, East Boston	36 14
Repairs at West Roxbury yard	24 18
Made 3 pairs 10-inch iron straps	11 35
Made 72 iron dowels for meter department	9 53
Made 11 iron brackets for gate chambers	9 50
Made 348 iron nipples for concrete boxes, 1 inch by 1 $\frac{1}{4}$ inches	5 78
Made 2 clamps and 10 dog nails	3 56
Made 16 wharf bolts	3 35
Repairs at Brighton yard	2 93
Made 100 S hooks for hydrant chains	2 03
Made 4 corner irons for meter department	1 98
Made 12 iron wedges for engine room	80
Total	<u>\$15,294 10</u>

CONCRETE BOXES.

Previous to the past year the manufacture of concrete boxes by this department was somewhat of an experiment, but we now have passed that stage and are making boxes out of concrete which are satisfactory in every respect and which will last almost indefinitely. The life of a wooden box varied with the soil in which it was set, and with conditions fairly good seven years was a rather long period. It may readily

be seen that a concrete box with an almost never ending life is a much more economical fixture than a wooden box even though the cost of the former may be slightly more than that of the latter. During the past year boxes for post hydrants, Lowry hydrants, small gate valves and meters were made out of concrete. They are composed of four reinforced concrete slabs with vertical edges beveled or mitered, so that when set up and in union with each other they form a box that is self-supporting. To keep the four sides of the box together while backfilling is in progress, the slabs are tied one to the other, at the corners, with short pieces of wire that are fastened to the reinforcement within.

The post hydrant and meter boxes being set in the sidewalk are only $1\frac{1}{4}$ inches thick, while the gate valve and Lowry hydrants boxes are $1\frac{3}{4}$ inches thick, because of the greater load imposed upon them in the roadway.

The proportion of the concrete is approximately 1-2-4. This is modified, however, in the construction of the $1\frac{1}{4}$ -inch or thin slabs where the cement factor is increased somewhat. The reinforcement consists of $\frac{1}{4}$ -inch twisted steel rods which are purchased cut in the desired lengths. They weigh about two-tenths of a pound to the linear foot. The sand is "Plum Island," bought by the cargo and delivered upon our wharf. It is clean and sharp and very satisfactory. The stone is finely broken "Roxbury pudding stone," small enough to pass through a screen of $\frac{1}{2}$ -inch mesh and too large to pass through one of $\frac{1}{8}$ -inch mesh. To thoroughly cleanse it from soil and other foreign matter, it is washed by a $2\frac{1}{2}$ -inch hose stream over a screen of sufficiently large mesh to allow the water to carry off the undesirable material and retain the clean stone. We find that the washed stone increases the strength of the concrete. After being mixed in a "cube" mixer the fresh concrete is placed in wooden forms, the inside surfaces of which have been oiled, the reinforcing rods placed in their proper position, and the mass "worked" and compacted by the boxmaker by means of mason's and plasterer's trowels until it is well solidified and without voids. The forms are then placed in a rack to set and in about four days' time the slabs are taken out of the forms, marked, and placed in the storage shed to age and eventually to serve their purpose in the ground.

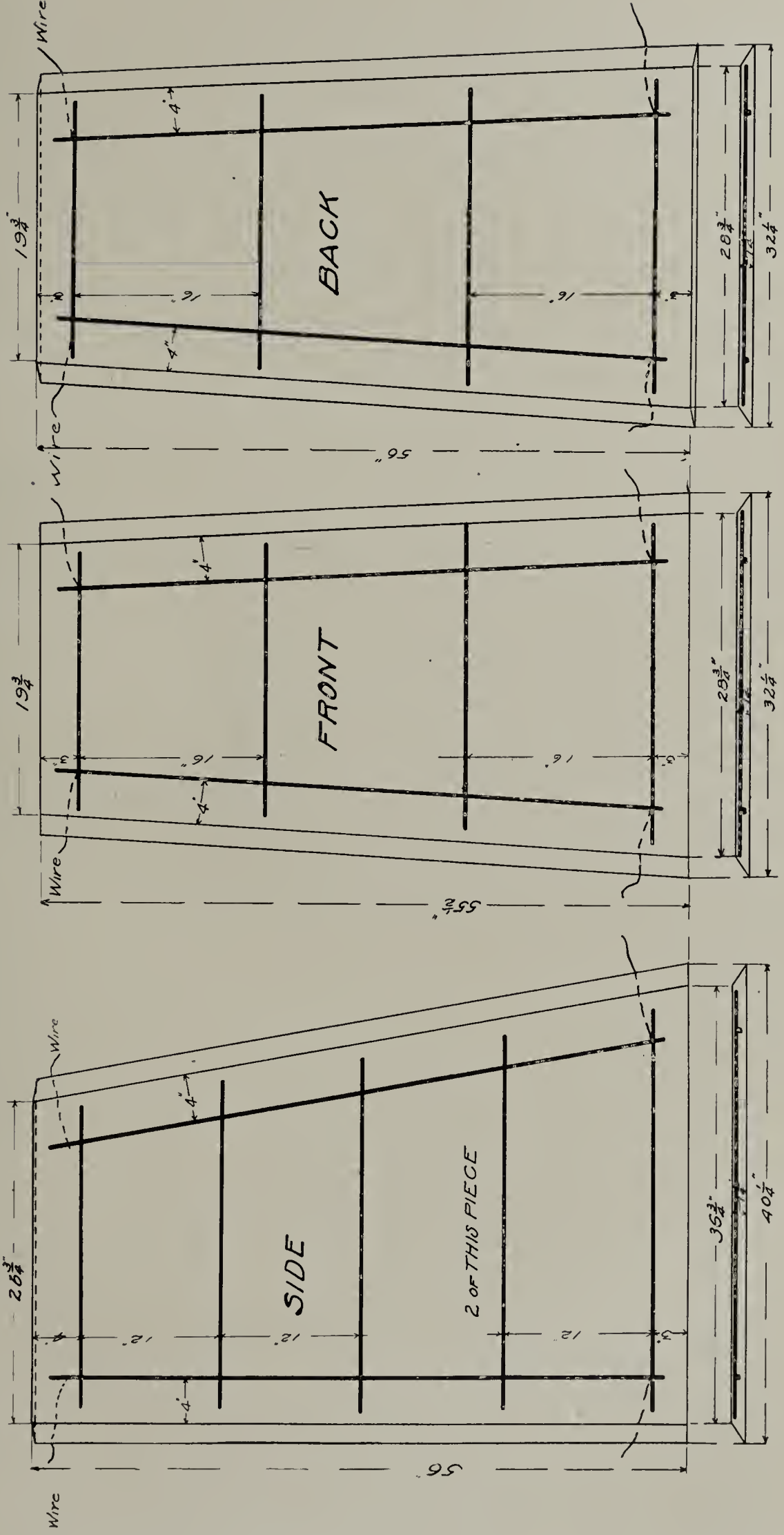
The drawings represented in the cut on the opposite page give an idea as to the dimensions and arrangement of the reinforcement. Although a plan of a post hydrant box, it is typical of the other boxes with certain modifications as to number of reinforcing rods and dimensions of slabs.

CONCRETE POST HYDRANT BOX

Reinforced with 4 inch Twisted Steel Rods.

1 1/2 Inches = 12 Inches

June 1908



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Some data as to the boxes and their construction follow:

Post Hydrant.

Thickness of slabs, $1\frac{1}{4}$ inches.

Total area of slabs, 48.9 square feet.

Material used:

Portland cement, 127 pounds.

Plum Island sand, 200 pounds.

$\frac{1}{4}$ -inch crushed stone (washed), 400 pounds.

$\frac{1}{4}$ -inch twisted steel rods (.2 pound per foot), 77.6 linear feet.

No. 13 galvanized wire, .7 pound.

Lowry Hydrant.

Thickness of slabs, $1\frac{3}{4}$ inches.

Total area of slabs, 46.1 square feet.

Material used:

Portland cement, 155 pounds.

Plum Island sand, 250 pounds.

$\frac{1}{4}$ -inch crushed stone (washed), 500 pounds.

$\frac{1}{4}$ -inch twisted steel rods (.2 pound per foot), 80.5 linear feet.

No. 13 galvanized wire, .7 pound.

Small Gate Valve.

Thickness of slabs, $1\frac{3}{4}$ inches.

Total area of slabs, 35.7 square feet.

Material used:

Portland cement, 125 pounds.

Plum Island sand, 250 pounds.

$\frac{1}{4}$ -inch crushed stone (washed), 500 pounds.

$\frac{1}{4}$ -inch twisted steel rods (.2 pound per foot), 67.8 linear feet.

No. 13 galvanized wire, .7 pound.

Meter.

Thickness of slabs, $1\frac{1}{4}$ inches.

Total area of slabs, 43.8 square feet.

Material used:

Portland cement, 125 pounds.

Plum Island sand, 200 pounds.

$\frac{1}{4}$ -inch crushed stone (washed), 400 pounds.

$\frac{1}{4}$ -inch twisted steel rods (.2 pound per foot), 74.5 linear feet.

No. 13 galvanized wire, .7 pound.

Tests to determine the transverse strength of the $1\frac{1}{4}$ -inch post hydrant slab and the $1\frac{3}{4}$ -inch Lowry hydrant slab were made as follows:

Post Hydrant Slab. $1\frac{1}{4}$ Inches Thick.

The slab was supported with a span of $19\frac{3}{4}$ inches at the top and 28 inches at the bottom and was loaded with pig lead on the center line of span. The concrete was sixty days old. The cement used was Atlas. Destruction occurred at 2,600 pounds. The load per linear inch required to destroy the slab was 46.43 pounds.

Lowry Hydrant Slab. 1 $\frac{3}{4}$ Inches Thick.

The slab was supported with a span of 18 $\frac{1}{2}$ inches at the top and 28 $\frac{1}{2}$ inches at the bottom, and was loaded with pig lead on the center line of span. The concrete was sixty days old. The cement used was Atlas. Partial destruction occurred at 4,007 pounds. It was impracticable to add sufficient weight to cause total destruction. The load per linear inch sustained was 85.26 pounds.

As actual conditions will not test the boxes so severely the results as recorded above assured us of an ample margin of safety.

Cut facing page 70 shows the boxes set up just as they are in the ground, with iron frames and covers placed upon their tops. Each box is numbered and the date of making and the initial or private mark of the workman who made the slab is marked upon the same. The opening in the bottom of the meter box (the small box) is made to allow of the entrance and exit of the service pipe.

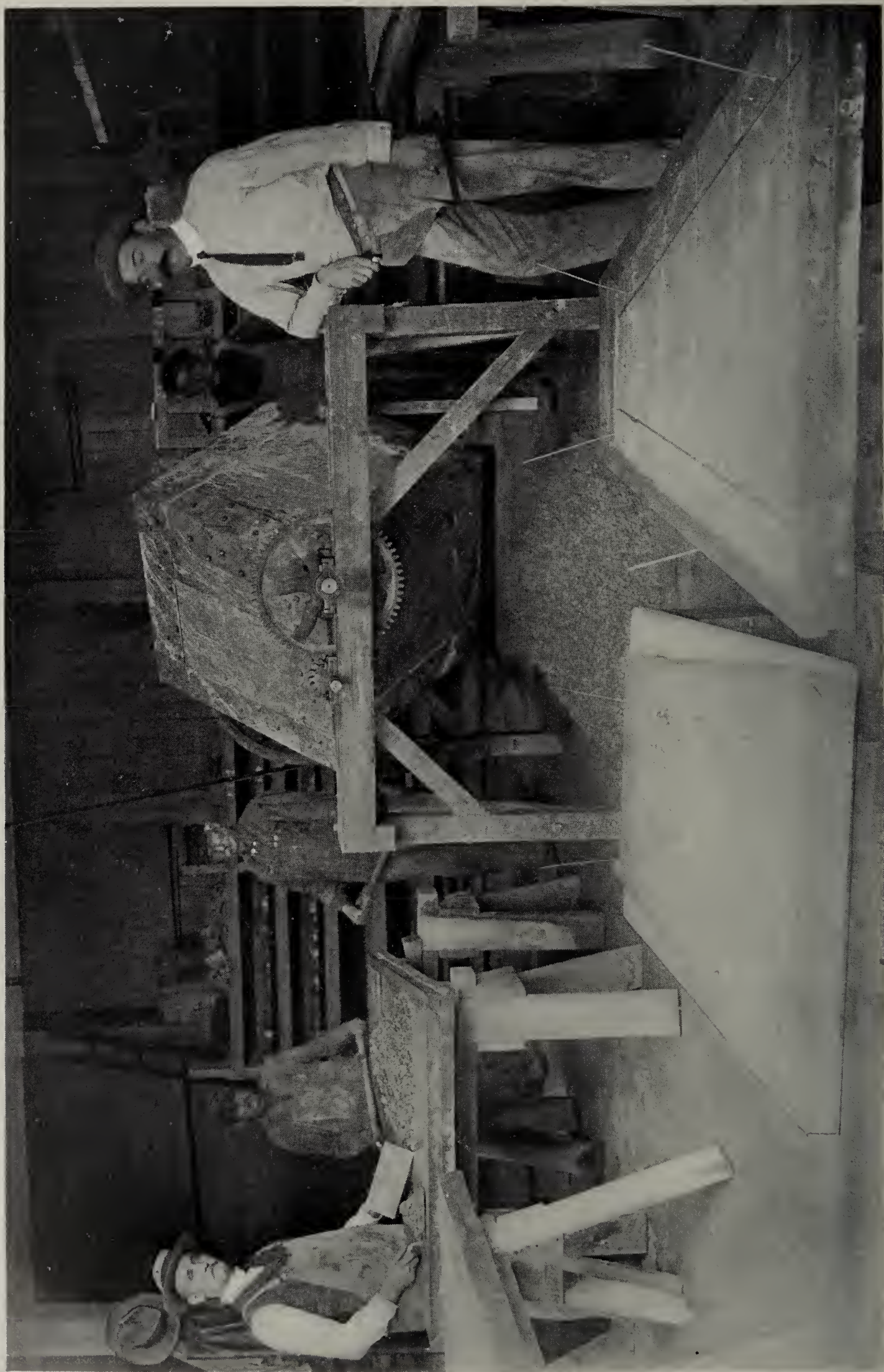
Cut facing page 71 shows a section of the interior of the shop and the concrete slabs in different stages of construction. Immediately under the cube mixer is a pile of freshly mixed concrete. To the left a workman is seen with trowels in hands about to spread the concrete evenly in the form. Upon the floor in front of the mixer are two slabs in the forms, both partly made, showing the reinforcing rods and the binding wires. In the rear are some of the racks in which the forms are kept while the concrete is setting.

PROPERTY AND PLANT.

Albany, Street Yard.—Although cramped for space, as has been the case ever since the Sewer Division and the City Hospital took from us large slices of our property, yet by rearrangement, more compactness of our stock and the addition of conveniences for handling and storing the same we have been able to get along fairly well. A thorough and complete renovation of the old buildings took place during the year. The lead, wagon and derrick shed was reroofed and painted; the old wooden stable had new sills and concrete piers put under it, hot water and electric lights installed and clothes closets built for the men. The old windows and frames were replaced by new ones, and the outside of the building clapboarded and painted. A large shed for aging and storing concrete boxes was built. The concrete shop was enlarged.



CONCRETE BOXES SET UP AS THEY ARE IN THE GROUND.



INTERIOR VIEW OF CONCRETE BOX SHOP.

A thorough repairing of the paint shop was begun and is now in progress, a portion of the main floor being partitioned off for a varnish room, something that we lacked heretofore. A two-inch plank flooring was placed in several parts of the yard upon which to pile castings. Electric lights in clusters of three 32 candle-power lamps were installed at different points in the yard. This was a much needed improvement over the old and very unsatisfactory hand lantern, with which the men had to locate and load stock after dark. They also serve to expose to the watchmen people who have no business in the yard. The lower offices and hallways were equipped with electric lights and a few portable lights were installed in the machine shop, displacing the antiquated candle and enabling the machinist to see clearly his work in places that were hitherto obscure. The brickwork in the stables was repointed and a dangerous stone coping reset. The roof of the machine shop was repaired. The driveway was repaved with bitulithic pavement, thus stopping the noise that for years past had jarred upon the nerves of the administrative force and interfered with the transaction of business. The superintendent's office has been painted and the telephone system rearranged. The office furniture was varnished and the fixtures in general freshened. Seven old and disabled horses were humanely killed and replaced by new ones. Two old wagons and two old buggies were sold by auction and one wagon broken up and burned. These were replaced by the purchase of one new buggy, one second-hand buggy and one new wagon. All wagons and carriages requiring attention were repaired and painted, and a beginning was made in equipping the wagons with an extra half spring bearing upon the rear axle, which shares in the support of the load when it exceeds an amount sufficient to compress the regular springs beyond the safe point. This will lessen the repairs upon the springs in particular and the wagon in general. The harnesses, all of which were in a very poor condition, were examined and some were repaired, and others which were dangerously worn and beyond repair were replaced by new sets. The hay and grain are now purchased through competition and certificates guaranteeing the quality furnished with each lot. No. 1 hay and No. 2 oats are bought, it being considered ultimate economy to buy a high grade of hay, as the lower grades contain dust and vegetable matter of no nutritious value, but which figure in the weight of the hay. A clean, sweet, succulent hay will go farther and is cheaper in the end than an inferior grade. No. 2 oats are relatively much better than

No. 2 hay. The tool houses have all been repaired, painted and lettered. Bolts have been substituted for screws in the hinges, hasps and staples and they have been otherwise strengthened against thievery.

In general the property has been much improved and is now in a more valuable condition than for some years past.

Dorchester Yard.—The buildings in this yard were repaired and painted, the roof of the stable was shingled, a new water-closet with modern plumbing installed, a new hot water heater and a large railway stove were bought and set up in the stable and office. The fence surrounding the yard was rebuilt and painted. Electric lights were installed, replacing lanterns. The yard is now in first-class condition and presents a very creditable appearance.

Charlestown Yard.—New gutters and conductors were placed upon the buildings. New sills were put under the large wooden building occupied by the Income Division in part with this division. The outside walls of this building were reclapboarded. The stalls in the stable were repaired. A new steam heating system was installed in the office and repair shop. Modern plumbing replaced old-fashioned and defective fixtures, and the yard and buildings in general were much improved and are now in first-class condition with the exception of painting, which will be done in the coming spring.

East Boston Yard and Reservoir.—Aside from the repairing of the iron fence around the reservoir grounds nothing of importance was done here during the year. It is intended to move in the early spring from the present quarters to the old pumping station in Condor street, opposite Brooks street, which will allow more yard room and prove in every way a more desirable place.

West Roxbury Yard.—This yard is not owned by the department. Therefore only repairs that were absolutely necessary to facilitate the work of the district were made. The location is not as central as it might be, especially now that the district is growing in the southern part. There are no sheds in the yard to cover and protect stock and appurtenances. The stall room is limited and altogether conditions are such as to require a change in the near future.

Brighton.—This can hardly be dignified by the word "yard." Conditions here are such as to demand a change to more commodious and suitable quarters as soon as possible. I would suggest that an effort be made towards securing a portion of the Street Department's yard on Chestnut Hill avenue.

Fisher Hill Reservoir.— Aside from the fact that this basin is rather small for the demands now made upon it, the property in general is in good condition and is well kept by those in charge of it.

Brookline Reservoir.— Although this reservoir has been sold to the town of Brookline, by the terms of the agreement we yet have charge of the property. It is not in use as a part of our system and we simply hold it until such time as we feel absolutely sure that we will not be required to use it. This we hope will be upon the completion of the new line of 48-inch pipe to be constructed by the Metropolitan Water Board in Beacon street, between Chestnut Hill reservoir and Coolidge's corner.

Parker Hill Reservoir.— This reservoir and grounds should be transferred to the Park Department and thus relieve the Water Department of further care and maintenance. It is of no value as a reservoir at the present time.

Mt. Bellevue Standpipe, West Roxbury.— Some repairs to the cover of the tank, the stairway and floor of the observatory were made during the past year. Otherwise the property is in good condition.

West Roxbury Pumping Station.— Although this station is owned by the Boston Water Department it is occupied and maintained by the Metropolitan Water Board.

Orient Heights Standpipe, East Boston.— Aside from the maintenance of the apparatus connected with the recording gauge between the standpipe and the yard office in Brooks street, there was nothing of importance done here. The long stretch of telegraph wire between the above-mentioned points has to be inspected every few weeks and quite frequently repairs are necessary, especially in the winter. The freezing of the water in the tank interferes with the operation of the float connected with the gauge, and constant attention is required to prevent such an occurrence.

Recording Pressure Gauges.— The following recording pressure gauges are the property of the department. They were installed and are maintained by this division and the readings recorded by the Engineering Department. They are all in working order.

LOCATION.	Service.	Grade of Gauge Above City Base.
Chestnut Hill pumping station.....	Low	127.5
Boston Common.....	Low	43.2
Salem street, near Prince street, Engine 8.....	Low	27.2
East street, at East street, Engine 7.....	Low	22.7
Congress street, South Boston, Engine 38.....	Low	21.1
Fourth street, at O street, South Boston, Engine 2.....	Low	51.8
710 Albany street, Boston Water Department.....	Low	24.0
Gibson street, Dorchester, Boston Water Department....	Low	29.3
Western avenue, Brighton, Engine 34.....	Low	27.5
Bunker Hill street, Charlestown, Engine 32.....	Spot Pond	36.0
Marion street, East Boston, Engine 5.....	Spot Pond	64.3
City Hall, Boston.....	High	105.1
Quincy street, Roxbury, Engine 24.....	High	98.3
Walnut street, Neponset, Engine 20.....	High	20.8
Norfolk street, Mattapan, Engine 19.....	High	79.1
Chestnut Hill avenue, Brighton, Engine 29.....	High	111.5
Centre street, Jamaica Plain, Engine 28.....	High	82.9

GENERAL RECOMMENDATIONS.

1. That the missing sections of mains between Atlantic avenue and the pipe tunnel at Congress Street Bridge be laid, thus introducing much needed additional high and low service supplies to South Boston.

2. That a pipe tunnel be constructed to carry the high and low service mains under Charles river at Warren Bridge.

3. That steps be taken to provide East Boston with another source of supply independent of the two present lines crossing Chelsea creek.

4. That provisions be made for a high service storage basin of larger capacity than the present one on Fisher Hill, Brookline.

5. That pipes crossing under railroad tracks be either removed or so protected with sheaths or envelopes as to protect them from vibration.

6. That the heavy car problem be studied and some efforts made to solve it.

7. That more stringent regulations concerning the use of hydrants be made and enforced.

8. That the Deacon meter system of waste detection be operated upon a larger and more efficient scale than during the past year.

9. That new quarters be secured for the department force in Brighton and West Roxbury.

10. That an automobile emergency car be purchased and put into service.

Respectfully submitted,

GEORGE H. FINNERAN,
Official in Charge.

TABLE I.
Showing Length of Main Lines of Water Pipes and Connections Owned and Operated by Boston Water Department, and Number of Valves Set in Same, January 31, 1909.

	DIAMETER OF PIPES IN INCHES.															Totals.	
	48	42	40	36	30	28	24	20	16	12	10	8	6	4	3		2
Length owned and operated January 31, 1908 (feet).....	38,263	16,813	23,104	43,473	90,096	244	77,563	94,674	205,073	1,209,779	163,241	615,048	* 1,288,104	67,702	6,027	* 5,524	* 3,944,728
Gate valves in same....	12	6	11	19	56	.....	63	71	394	2,515	518	1,713	3,973	515	10	7	*9,883
Air valves in same.....	24	5	10	24	59	2	35	36	22	26	3	.....	3	.....	.....	.....	249
Blow-offs in same.....	8	3	6	11	27	.....	17	41	55	134	20	24	27	2	.....	.....	375
Length laid or relaid during year 1908-09 (ft.)	912	.....	.....	145	283	.....	.....	1,246	4,032	21,888	8,497	13,478	3,318	3,728	.....	.....	57,527
Gate valves in same....	.....	.....	.....	.....	.....	.....	.....	3	18	67	38	62	18	3	.....	.....	209
Air valves in same.....	1	.....	.....	1	1	.....	.....	5	1	3	.....	.....	.....	.....	.....	.....	12
Blow-offs in same.....	.....	.....	.....	.....	1	.....	.....	2	2	2	1	.....	.....	.....	.....	.....	8
Length abandoned during year 1908-09 (ft.)	.....	.....	.....	125	265	.....	110	196	192	7,253	71	3,060	12,040	1,983	201	.....	25,496
Gate valves in same....	.....	.....	.....	.....	.....	.....	.....	.....	2	15	1	13	50	10	.....	.....	91
Air valves in same.....	1	.....	.....	1	1	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	6
Blow-offs in same.....	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	3
Length owned and operated January 31, 1909 (feet).....	39,175	16,813	73,104	43,493	90,114	244	77,453	95,724	208,913	1,224,414	171,667	625,466	1,279,382	69,447	5,826	* 5,524	† 3,976,759
Gate valves in same....	12	6	11	19	56	.....	63	74	410	2,567	555	1,762	3,941	508	10	7	10,001
Air valves in same.....	24	5	10	24	59	2	34	40	23	28	3	.....	3	.....	.....	.....	255
Blow-offs in same.....	8	3	6	11	27	.....	17	42	57	135	21	24	27	2	.....	.....	380

* These totals differ from those in last year's annual report because of additions and corrections due to omissions and errors in the tables of previous years.
† 753.17 miles.

TABLE II.
Statement of Hydrant, Blow-off and Reservoir Pipes, January 31, 1909.

	DIAMETER IN INCHES.								Totals.
	16	12	10	9	8	6	4	3	
Total length connected with system January 31, 1908.....	474	6,530	126	2,423	2,492	42,670	6,384	44	61,143
Length laid and relaid during the year.....	.....	101	24	.....	526	1,262	86	.....	1,999
Length abandoned during the year.....	.....	55	.....	130	42	394	71	.....	692
Total length connected with system January 31, 1909.....	474	6,576	150	2,293	2,976	43,538	6,399	44	62,450

TABLE III.

Hydrants Established and Abandoned during the Year.

	ESTABLISHED.						ABANDONED.					
	Lowry.	Boston Lowry.	Ordinary Post.	Boston Post.	Boston.	Totals.	Lowry.	Boston Lowry.	Ordinary Post.	Boston Post.	Boston.	Totals.
City Proper (public)....	6	1	....	21	....	28	16	1	4	1	7	29
" (private)....	....	....	....	1	....	1	....	....	....	....	1	1
Roxbury (public).....	1	3	....	37	1	42	17	3	6	3	2	31
West Roxbury (public). ....	....	8	4	52	....	64	5	17	11	3	2	38
Brighton (public).....	....	6	....	4	....	10	....	3	....	....	....	3
Dorchester (public)....	....	13	2	62	....	77	16	23	13	....	1	53
Dorchester (private)....	....	....	....	4	....	4	....	....	....	....	....	....
South Boston (public).. ....	....	4	....	17	2	23	7	2	1	1	9	20
East Boston (public)... ....	....	1	1	17	....	19	5	2	8	1	....	16
Charlestown (public)... ....	....	7	....	4	....	11	....	1	....	1	....	2
Deer Island (private)... ....	....	....	1	....	....	1	....	....	1	....	....	1
Total number of public..	7	43	7	214	3	274	66	52	43	10	21	192
Total number of private,	....	....	1	5	....	6	....	....	1	....	1	2

NOTE.— The columns headed "Boston Post" include what was known as the "Bachelor Post" (see text under "Hydrants").

TABLE IV.

Total Number of Hydrants in System January 31, 1909.

	Lowry.	Boston Lowry.	Ordinary Post.	Boston Post.	Boston.	Totals.
City Proper (public).....	603	49	251	466	106	1,475
" (private).....	4	.....	9	5	39	57
Roxbury (public).....	469	91	429	302	37	1,328
" (private).....	2	1	.....	3	10	16
West Roxbury (public).....	101	226	651	177	26	1,181
" (private).....	.....	.....	16	.....	1	17
Brighton (public).....	74	92	391	35	18	610
" (private).....	.....	.....	7	.....	2	9
Dorchester (public).....	388	232	954	349	27	1,950
" (private).....	.....	1	3	8	4	16
South Boston (public).....	183	34	142	212	29	600
" (private).....	3	.....	15	.....	28	46
East Boston (public).....	110	33	173	110	6	432
" (private).....	8	.....	7	.....	25	40
Charlestown (public).....	169	45	33	94	2	343
" (private).....	14	1	37	.....	6	58
Deer Island (private).....	.....	.....	21	.....	.....	21
Long Island (private)..	.....	.....	6	.....	.....	6
Thompson's Island (private).....	.....	.....	2	.....	.....	2
Gallop's Island (private).....	.....	.....	1	.....	1	2
Rainsford Island (private).....	.....	.....	3	.....	1	4
Quincy.....	.....	1	11	.....	.....	12
Brookline.....	.....	2	.....	.....	.....	2
Total number of public hydrants...	2,097	802	3,024	1,745	251	7,919
Total number of private and suburban hydrants.....	31	6	138	16	117	308

NOTE 1.—The column headed "Boston Post" includes what was known as the "Bachelder Post" (see text under "Hydrants").

NOTE 2.—Difference in figures from last year's report are due to corrections.

TABLE V.

Statement of Service Pipes Laid and Abandoned during the Year Ending January 31, 1909.

SIZES OF SERVICES LAID AND ABANDONED.	CITY PROPER.		ROXBURY.		WEST ROXBURY.		BRIGHTON.		DORCHESTER.		SOUTH BOSTON.		EAST BOSTON.		CHARLES- TOWN.		TOTALS.	
	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.	Number of Services.	Length in Feet.
10-inch laid	1	24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	24
8-inch laid	1	3	..	..	..	..	..	..	1	24	2	72	..	..	..	..	4	99
6-inch laid	..	..	..	..	1	12	..	..	..	..	2	27	..	..	1	11	4	50
6-inch abandoned	..	..	..	..	..	..	..	..	..	..	1	27	..	..	1	12	2	39
4-inch laid	16	184	2	55	1	14	..	..	1	6	2	72	..	..	..	..	23	346
4-inch abandoned	9	115	3	57	1	14	..	..	..	..	..	..	..	..	..	..	13	186
3-inch laid	17	325	..	..	..	..	1	42	2	27	3	118	..	..	4	79	29	639
3-inch abandoned	4	57	..	..	..	..	..	..	1	52	..	..	2	48	..	..	6	124
2-inch laid	8	154	1	2	2	41	1	55	1	2	2	24	1	15	3	97	19	377
2-inch abandoned	3	16	1	12	1	10	..	..	1	34	1	34	..	2	2	45	9	151
1½-inch laid	22	479	4	41	3	19	1	39	3	10	3	54	..	..	..	..	36	642
1½-inch abandoned	3	60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	60
1¼-inch laid	10	302	1	2	1	47	3	39	2	34	1	49	1	40	..	..	19	513
1¼-inch abandoned	1	43	..	..	..	..	..	..	1	16	..	..	..	..	..	..	2	59
1-inch laid	31	651	10	294	3	52	1	22	7	89	6	146	2	54	2	98	62	1,406
1-inch abandoned	8	121	2	19	1	3	1	33	..	..	3	78	1	42	..	..	16	296
¾-inch laid	12	926	1	18	..	..	10	243	7	155	1	32	2	61	3	49	36	1,484
¾-inch abandoned	2	53	..	..	1	4	..	..	..	..	..	..	1	15	1	19	5	91
½-inch laid	52	956	79	1,720	152	2,774	67	1,523	413	8,885	119	2,568	83	2,312	29	820	994	21,558
½-inch abandoned	83	1,741	8	125	8	202	24	753	8	123	19	394	4	81	3	35	157	3,454
½-inch abandoned	1	22	..	..	..	..	..	..	..	..	3	86	5	120	7	124	16	352
Total laid	170	4,004	98	2,132	163	2,959	84	1,963	437	9,232	141	3,162	92	2,532	42	1,154	1,227	27,138
Total abandoned	114	2,228	14	213	12	233	25	786	11	225	27	619	12	273	14	235	229	4,812
Net increase	56	1,776	84	1,919	151	2,726	59	1,177	426	9,007	114	2,543	80	2,259	28	919	998	22,326

NOTE.—This table includes fire, motor and elevator pipes.

TABLE VI.

Total Number and Aggregate Length of Service Pipes of Various Sizes Connected with System January 31, 1909.

SIZES.	Total Number.	Aggregate Length.
16-inch	1	9
12-inch	14	3,542
10-inch	2	1,349
8-inch	26	2,751
6-inch	146	21,650
4-inch	1,102	45,181
3-inch	721	21,838
2-inch	1,839	59,244
1½-inch	1,279	39,207
1¼-inch	330	10,569
1-inch	2,319	129,802
¾-inch	2,510	92,936
⅝-inch	77,770	2,201,201
½-inch	6,986	160,100
Totals	95,045	2,789,379

TABLE VII.

Fountains.

- Style.*
- Established during the Year.*
- B. Cambridge street, opposite Rutherford avenue, Charlestown.

B. Junction of Saratoga and Bennington streets, East Boston.

B. Forest Hills square, West Roxbury.

B. King square, Dorchester.

C. Bennington street, at Orient Heights station, East Boston.

- Abandoned during the Year.*
- A. Saratoga street, at Swift street, East Boston.

A. A street, at First street, South Boston.

B. 548 Main street, Charlestown.

B. Forest Hills square, West Roxbury.

C. North Bennet street, at playground, City Proper.

F. Hancock street, at Dorchester avenue, Dorchester.

Number of Fountains in Service January 31, 1909.

DISTRICTS.	Style A.	Style B.	Style C.	Style D.	Style E.	Style F.	Style G.	Totals.
City Proper.....	9	5	7	.....	12	.....	.....	33
Roxbury.....	8	2	1	.....	5	.....	.....	16
West Roxbury.....	5	1	.....	1	2	.....	.....	9
Brighton.....	5	.....	1	.....	.....	.....	.....	6
Dorchester.....	.....	3	2	1	.....	6	1	13
South Boston.....	1	1	4	.....	4	.....	.....	10
East Boston.....	.....	4	3	.....	4	.....	.....	11
Charlestown.....	1	3	.....	.....	4	.....	.....	8
Totals.....	29	19	18	2	31	6	1	106

- Style.*
- NOTE.*
- A. Indicates fountain for man and beast, with automatic fixtures for man and beast in warm weather and a continuous flow of water for beasts in cold weather.

B. Indicates fountain for beasts only. Continuous flow of water all the year.

C. Indicates fountain for man only. Automatic fixtures. In service during warm weather only.

D. Indicates fountain for man and beast. Automatic fixtures for both. In service during warm weather only.

E. Indicates cold water fountain for man only. Automatic fixtures. In service during warm weather only.

F. Indicates fountain for man and beast, with automatic fixtures for man in warm weather and a continuous flow of water for beasts all the year.

G. Indicates fountain for man and beast. Hygienic "bubble" fixtures for man. Continuous flow of water for man and beast all the year.

SUMMARY OF STATISTICS FOR THE YEAR ENDING
JANUARY 1, 1909. (FINANCIAL, JANUARY 31, 1909.)

[In form recommended by the New England Water Works Association.]

BOSTON WATERWORKS.

Boston. (City.)	Suffolk. (County.)	Massachusetts. (State.)
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GENERAL STATISTICS.

Population by census of 1905, 595,380.
Date of construction, 1848.
By whom owned, supplied by state; distribution system owned by city.
Source of supply, Nashua and Sudbury rivers; Lake Cochituate.
Mode of supply (whether gravity or pumping), pumping and gravity (all pumps operated by state).

FINANCIAL STATISTICS.

RECEIPTS.

From ordinary (maintenance) receipts .	\$2,695,761 00	
Total		<u>\$2,695,761 00</u>

From Water Rates.

Fixture rates	\$1,369,681 06	
Meter rates	1,256,883 53	
Total from consumers		\$2,626,564 59
From other sources		69,196 41
Total		<u>\$2,695,761 00</u>

EXPENDITURES.

Waterworks Maintenance and Extension.

Operation (management, repairs and extension)	\$729,677 14	
Total maintenance and extension		\$729,677 14
Interest on bonds		175,010 17
Metropolitan water assessment		1,789,315 84
Refunded water rates		1,757 85
Total		<u>\$2,695,761 00</u>
Disposition of balance:		
Net cost of works to date		\$17,257,461 89
Bonded debt at date		4,249,500 00
Value of sinking fund at date		3,637,956 71
Average rate of interest, $3\frac{8.9}{100}$ per cent.		

STATISTICS OF CONSUMPTION OF WATER.

Estimated total population at date, 618,000.
Estimated population on lines of pipe, 618,000.*
Passed through meters, 8,254,080,000 gallons.
Percentage of consumption metered, 22.9.
Average daily consumption, 98,379,300 gallons.
Gallons per day to each inhabitant, 158.*

* No allowance for daily floating population.

STATISTICS RELATING TO DISTRIBUTION SYSTEM.

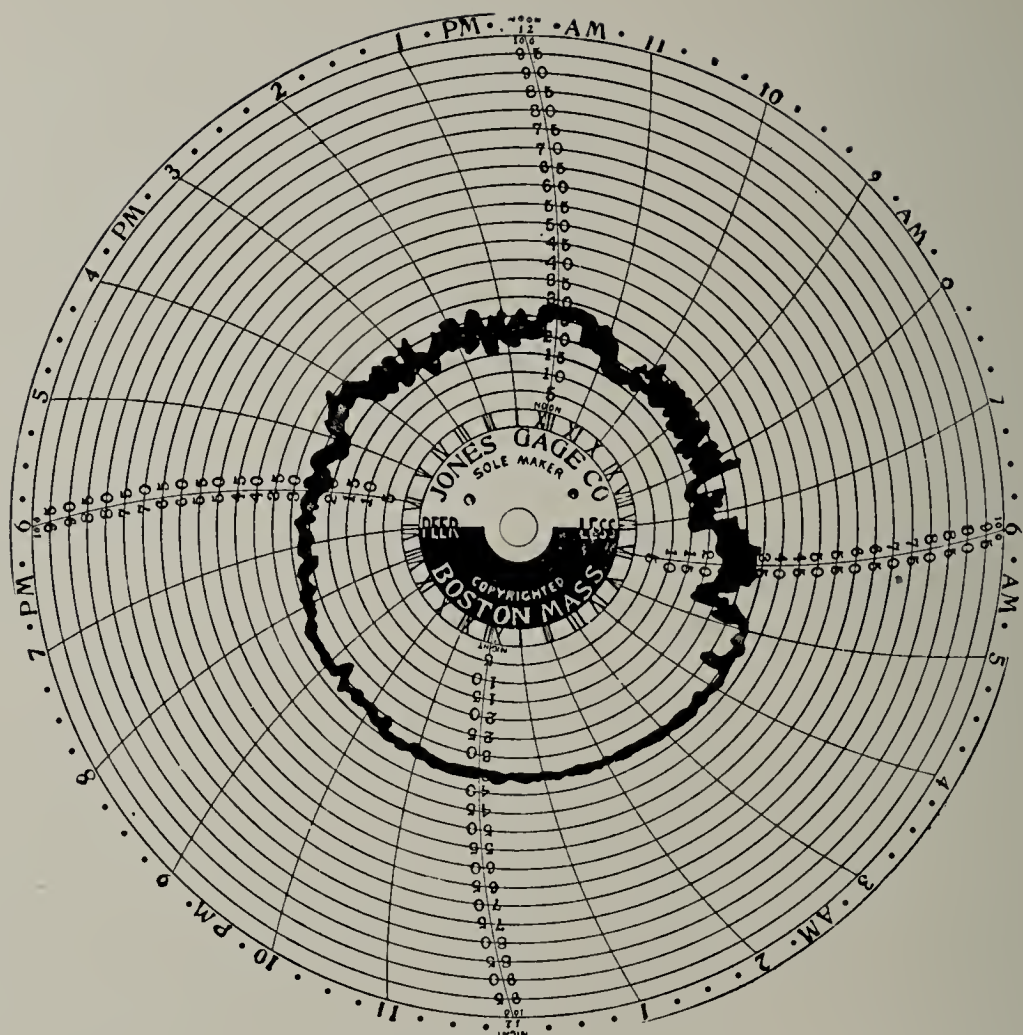
MAINS.

Kind of pipe, cast iron.
 Sizes, from 4-inch to 48-inch.
 Extended, 57,527 feet during year.
 Discontinued, 25,496 feet during year.
 Total now in use, 753.17 miles.
 Cost of repairs per mile, \$29.42.
 Number of leaks per mile, 3.
 Length of pipes less than 4 inches diameter, 2.14 miles.
 Number of hydrants added during year (public and private), 86.
 Number of hydrants (public and private) now in use, 8,227.
 Number of stop gates added during year, 118.
 Number of stop gates now in use, 10,001.
 Number of stop gates smaller than 4-inch, 17.
 Number of blow-offs, 380.
 Range of pressure on mains, 20 pounds to 90 pounds.

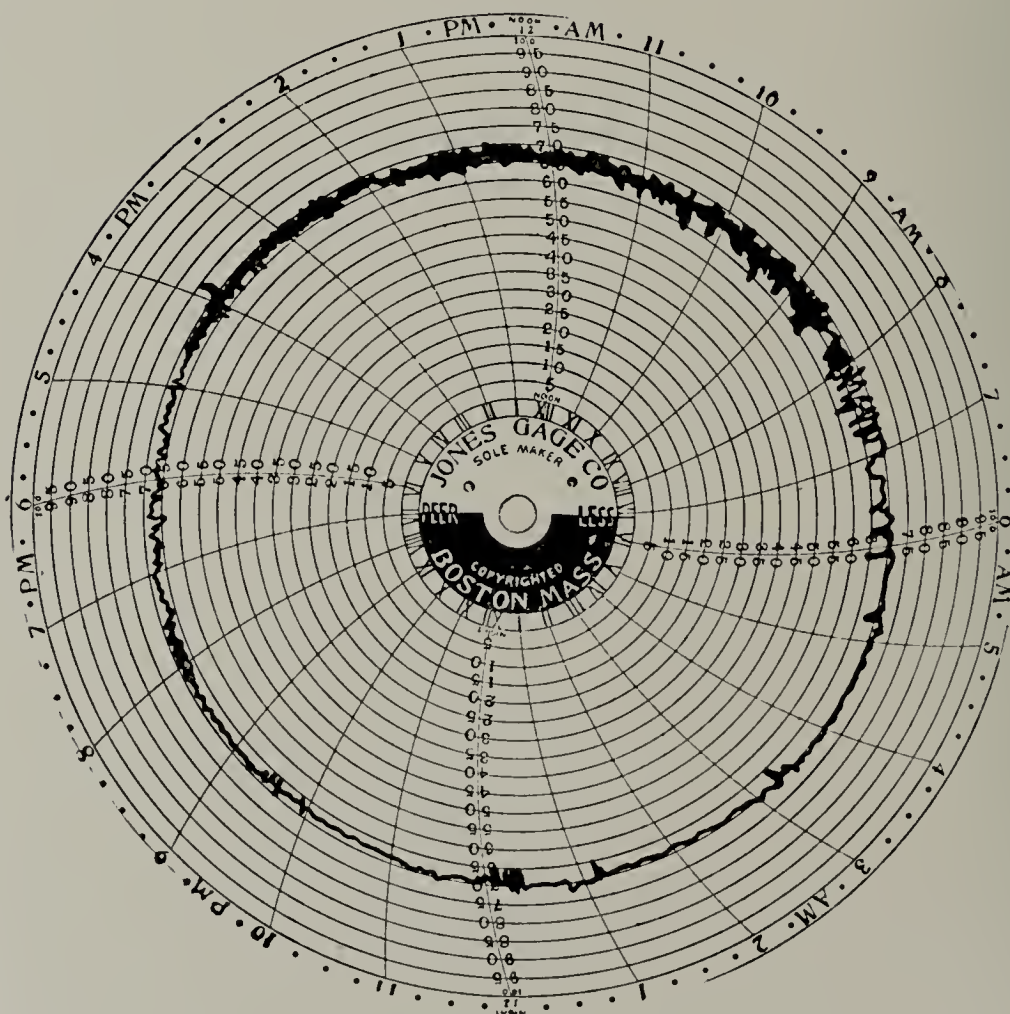
SERVICES.

Kind of pipe, lead, lead-lined iron and cast iron.
 Sizes, $\frac{1}{2}$ -inch to 16-inch.
 Extended, 27,138 feet.
 Discontinued, 4,812 feet.
 Total now in use, 528.29 miles.
 Number of service taps added during year, 1,255.
 Number now in use, 95,045.
 Average length of service, 29.34 feet.
 Average cost of service for the year, \$23.66.
 Number of meters added, 434.
 Discontinued, 238.
 Number now in use, 5,380.
 Percentage of services metered, $5\frac{66}{100}$.
 Percentage of receipts from metered water (meter rates divided by total from consumers), $47\frac{85}{100}$.
 Number of motors and elevators added, 13.
 Number now in use, 702.

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DECEMBER 8, 1908.



JANUARY 17, 1909.

REPORT OF THE ENGINEER.

BOSTON, February 1, 1909.

WILLIAM E. HANNAN, ESQ.,

Water Commissioner:

DEAR SIR,— The amount of work done by contract in the Water Department has largely increased during the past two years; this has added materially to the work of the Engineering Department, involving as it does not only the necessary studies, preparation of plans, specifications, etc., but the supervision of the work done and the making of estimates for payment.

During the past year the number of these contracts numbered thirty-seven.

The 48-inch low service main laid last year from Tremont street through Prentiss street and Longwood avenue to Brookline avenue was extended in Longwood avenue to connect at Muddy river with the 48-inch line laid by the Metropolitan Water and Sewerage Board from Coolidge's Corner, Brookline; this new feed greatly strengthens the supply to the city and will still further strengthen it when the Metropolitan Board extends the 48-inch pipe from Coolidge's Corner to Chestnut Hill Reservoir, as it proposes to do early in the coming season.

Two lines of flexible pipe were laid to improve the harbor service. One, between Long Island and Rainsford Island, a 4-inch pipe, 3,534 feet in length, to replace a pipe of the same size laid in 1895; and the other, between Moon Island and Long Island, a 12-inch pipe, 3,231 feet long, to supplement a 6-inch line laid in 1895, which for several years past has been too small to furnish a satisfactory supply for Long. Rainsford, Gallop's and Lovell's islands and for Fort Warren; the effect of putting this 12-inch line into service is shown on opposite page by gauge dials from Long Island taken before and after the line was turned on.

The flexible pipes were laid in a trench 5 feet deep, by means of a long chute extending from the deck of a lighter to the bottom of the trench, the lighter being pulled ahead as each pipe was jointed. The pipes were tested for leakage before the trench was refilled and again after refilling, and the

actual leakage found, under 85 pounds pressure, in the two lines after the completion of the work was as follows:

3,534 linear feet, 4-inch, Long to Rainsford, 0.086 cubic feet per minute.
3,231 linear feet, 12-inch, Moon to Long, 0.036 cubic feet per minute.

The 20-inch and 30-inch low service and 16-inch high service mains on Warren Bridge are in a very unsafe location, the 30-inch and 16-inch pipes being particularly a source of anxiety, as they have already failed several times by pulling apart. They are laid under the flooring of the bridge with six 90° bends, the unbalanced pressures from which can only be transferred by rods and struts to the wooden bridge structure, which was built in 1883-84. On account of the age of the bridge there is nothing sufficiently substantial to fasten to and the result is frequent and dangerous movements of the pipes. The low service pipes have not been in use under usual conditions since 1898, when the state began to supply water to the city and the pressure in Charlestown was raised about 15 pounds above that in the City Proper. It has, however, been necessary to put them in service a number of times when one or more of the regular supply mains have been out of commission. In the event of a very serious fire in the downtown district an effective head might only be maintained through their use, and the ability to obtain a supply from the northern low service of the Metropolitan waterworks by means of these pipes would be invaluable in time of conflagration or serious accident by making available the large storage of Spot pond at a time when such help was vital.

The 16-inch pipe on the Warren Bridge is the only feed for the high service district of Charlestown and its failure would destroy high service in that section. I recommend that a tunnel large enough to carry a 36-inch and a 16-inch pipe be built under the Charles river in the neighborhood of Warren Bridge,—the approximate cost of this work is \$100,000.

East Boston is supplied by the Metropolitan Water and Sewerage Board through two lines of 24-inch pipe crossing Chelsea creek from Chelsea to East Boston. These pipes, laid in 1871 and 1900, are laid on the bottom of the creek and are entirely exposed above low water mark on each shore; their location is particularly dangerous on the Chelsea shore, where the pipes lie in a dock about 200 feet long and 100 feet wide, closely built up on each side; at one point a brick building, 62 feet high, is located within 43 feet of the nearest pipe and on the opposite side of the dock a wooden building, 28 feet high, is 43 feet distant from the pipes. These buildings are

very inflammable and in the event of their destruction by fire at a time when the tide was low, the waterpipes would be in great danger from falling walls and from heat. The safety of this supply is further imperiled by the weakened condition of the mains owing to electrolysis; the actual conditions found in the pipes are described as follows on page 136 of the Sixth Annual Report of the Metropolitan Water and Sewerage Board: "Examination of the pipes showed that they were badly disintegrated; at one point a hole was cut clear through the pipe while making the examination, causing a leak which had to be plugged."

A new and independent supply main for East Boston should be laid without delay.

The "double high" service of West Roxbury comprises substantially that part of the territory above grade 170. The supply for this service is pumped by the Metropolitan Water and Sewerage Board at a pumping station, formerly operated by the City of Boston, on Washington street, near Metropolitan avenue. The water is delivered by the pumps directly into the mains and thence into a standpipe on Mt. Bellevue in the southerly end of the district; from this standpipe the system extends about $1\frac{1}{2}$ miles in a westerly and more than 4 miles in a northerly direction and for about $2\frac{3}{4}$ miles of the distance through a single line of pipe. The water supply under these conditions is very unreliable. I recommend for the purpose of guarding the supply that a second standpipe be built in the northerly part of the system, and that more storage be provided on Mt. Bellevue.

The storage for the high service supply of the city is limited to Fisher Hill Reservoir, built by the city in 1887 and containing when full 15,000,000 gallons, and to a reservoir in Newton, on Waban Hill, containing 13,500,000 gallons, a total quantity of water sufficient for about a day's supply, while there is a high service storage reservoir containing 41,400,000 gallons for the municipalities north of the city to safeguard a daily consumption of but 9,000,000 gallons daily. This condition of the City of Boston high service supply is not in accord with conservative practice; an accident might occur to the pumping machinery at Chestnut Hill of such a nature that repairs could not be made in a day's time. I recommend that a storage reservoir or reservoirs be built on the high service system, large enough to hold at least six days' supply for the entire high service of the city. This reservoir is of such importance to the city that if the Metropolitan Board for any reason cannot construct it the city should do so, especially as in the event of

its construction by the state the city would have to pay for 80 per cent of the cost of construction.

The daily average consumption of water in the city during the past year was 98,379,300 gallons, or 158 gallons per capita; of this amount at least one-third is preventable waste, due to leaks which it is possible to locate and to improper use of water. For several years past no serious attempt has been made to restrict waste, and the water takers have lost sight of the fact that water is a commodity of value and that its use should be restricted. Under the provisions of chapter 524 of the Acts of 1907 the city is required to meter annually 5 per cent of the unmetered services as well as all new ones. Assuming that eventually meters on every service will bring about a normal consumption, still other methods are necessary if the desired result is to be had in a reasonable length of time; in fact, other methods must be employed in any event if the large waste in the main pipes and services is to be checked.

The Deacon waste water meter is an instrument that records the rate of flow into any particular section of the pipe system and, when operated in connection with an efficient inspection service, it forms a most efficient means of detecting waste. The city now is equipped with eighty-five of these meters, or enough to cover the entire city; they should be operated in connection with a thoroughly efficient force of inspectors, and a rigid system of fines should be imposed in case of failure to repair leaks after reasonable notice. In addition, the water used in public buildings, schoolhouses, etc., should be at once metered and a charge made at least for all water wasted. Further, all city and state departments should be required to make daily or weekly returns to the Water Commissioner, giving data by which the water used from hydrants and standpipes may be (approximately) estimated. There seems to be no reason why the consumption should not be reduced at least to 100 gallons per capita.

Yours respectfully,

WILLIAM JACKSON,
City Engineer.

Average Stated Monthly Heights, in Feet, above City Base, to which Water Rose at Different Stations, on the Boston Water Works.

1908.	Chestnut Hill Pumping Station, Brighton.				Boston Common.				Engine House No. 8, Salem Street.				Engine House No. 7, East Street.				Engine House No. 38, Congress Street, South Boston.				Boston Water Department Yard, No. 710 Albany Street, Roxbury.				Engine House No. 2, Fourth and O Streets, South Boston.				Engine House No. 34, Western Avenue, Brighton.				Engine House No. 32, Bunker Hill Street, Charlestown.				Engine House No. 5, Marion Street, East Boston.				City Hall, High Service.		Engine House No. 24, Quincy Street, Roxbury. High Service.		Engine House No. 19, Norfolk Street, Dorchester. High Service.		Engine House No. 28, Centre Street, Jamaica Plain. High Service.		Engine House No. 29, Chestnut Hill Avenue, Brighton. High Service.		Water Department Yard, Gibson Street, Dorchester.			
Month.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	3 a. m.	9 a. m.	1 p. m.	5 p. m.
January.....	140.4	165.0	160.1	158.7					125.4	116.4	117.7	119.9	128.1	119.1	122.1	123.2	121.7	111.0	112.2	114.9	126.3	117.8	119.7	122.2	122.9	111.4	114.7	116.9	139.5	140.3	141.7	141.9	159.4	149.1	152.5	154.1	149.7	135.1	139.3	141.9	245.7	233.9	244.3	234.3	248.1	241.6			248.9	246.3	121.8	110.5	115.2	116.8
February.....	142.8	167.3	161.9	160.4	123.7	117.5	118.9	121.3	118.8	110.5	112.2	115.0	121.9	114.2	116.1	117.8	113.6	104.5	106.3	108.0	119.6	112.9	114.7	116.8	116.4	106.2	109.0	110.9	134.6	135.8	137.7	137.8	161.0	154.6	156.8	156.2	142.6	130.0	134.3	135.8	244.2	232.5	242.0	231.7	245.7	238.7			247.6	244.8	118.0	101.9	106.2	107.7
March.....	141.3	165.8	160.2	158.3	131.7	123.9	125.0	127.2	126.9	117.5	118.7	120.5	129.9	120.8	122.2	124.0	123.8	112.4	113.6	115.9	127.4	118.8	120.5	122.3	123.2	111.8	115.1	116.1	135.7	136.0	137.1	137.1	163.4	156.8	157.2	157.0	152.1	138.2	142.4	144.5	246.2	234.7	244.5	232.8	248.7	242.1			246.5	243.3	131.2	119.9	122.9	124.3
April.....	139.9	165.4	159.2	158.4	134.1	126.1	126.5	129.1	128.8	119.3	120.4	121.6	131.2	121.8	123.8	124.9	125.2	113.9	115.3	118.7	128.1	120.8	122.3	124.3	126.2	113.6	117.7	119.3	137.2	137.2	139.2	140.5	163.8	155.2	157.3	157.6	151.8	139.0	142.3	144.4	246.3	233.8	244.5	232.6	248.4	241.4			246.8	243.9	132.7	121.1	124.9	125.6
May.....	140.6	164.3	158.7	157.8	134.8	124.0	125.8	128.7	129.3	117.3	119.0	121.0	132.0	120.3	122.3	124.7	126.1	112.7	114.7	118.5	128.4	118.7	122.5	123.6	127.5	111.9	116.3	119.0	139.2	137.1	138.7	139.8	164.4	156.1	157.4	157.7	153.7	140.2	143.6	146.0	244.7	232.1	243.8	229.3	246.9	238.5			247.1	242.9	133.4	119.5	124.2	125.0
June.....	142.4	166.9	159.6	159.8	135.3	122.8	123.5	127.6	129.8	115.5	116.9	121.2	132.6	117.5	121.2	124.2	126.6	110.0	112.8	117.1	129.2	117.8	122.2	122.3	128.5	110.3	115.1	118.2	140.2	135.5	138.4	140.2	170.2	160.7	162.4	161.5	154.1	138.4	142.8	144.3	244.0	229.4	243.9	228.1	245.4	234.8			247.5	242.4	133.4	116.8	123.6	124.1
July.....	140.3	165.6	158.4	158.0	133.9	123.4	124.0	127.6	127.9	116.0	116.6	120.0	130.0	119.1	122.0	122.7	124.9	111.1	113.0	116.1	128.0	118.6	122.7	121.5	126.7	110.9	115.7	116.7	138.3	136.3	139.4	138.5	169.6	162.1	163.5	162.7	153.6	138.2	143.3	143.9	244.1	231.6	244.4	231.6	246.0	237.4			246.9	243.0	132.5	118.4	123.0	122.6
August.....	140.7	166.0	159.8	158.0	135.7	126.7	128.6	130.5	129.6	119.2	120.8	123.1	131.6	122.5	125.2	126.0	125.7	113.3	116.1	119.2	128.9	120.8	126.1	124.9	127.8	113.5	118.9	119.4	136.1	134.0	137.2	136.9	168.5	162.9	163.4	162.0					244.6	233.5	244.5	234.5	246.6	239.4	248.2	242.5	247.0	243.5	131.7	119.2	125.2	124.2
September.....	142.4	166.0	159.0	157.9	137.7	127.3	127.2	130.6	131.4	118.4	118.3	123.4	134.7	121.2	124.8	126.8	128.5	113.6	115.1	119.8	132.0	119.7	125.6	124.5	130.5	113.7	118.0	121.2	141.9	137.1	141.9	137.1	167.0	161.2	162.5	160.4					244.4	232.7	244.4	231.2	247.3	238.0	248.8	241.5	246.9	243.2	134.3	119.6	126.8	125.4
October.....	143.2	166.0	159.2	158.6	140.3	129.6	129.4	132.5	133.2	121.5	122.7	125.2	135.7	123.8	126.2	127.9	131.9	118.6	119.2	123.1	133.7	124.1	126.4	127.3	133.6	119.8	121.0	123.9	142.7	143.2	142.3	139.3	162.9	158.9	159.3	158.7	152.0	140.0	142.3	142.1	245.3	232.7	244.4	231.0	247.6	238.8	248.9	241.9	247.1	244.2	135.9	122.7	127.0	126.9
November.....	145.6	164.9	158.2	157.2	143.7	130.2	130.6	133.2	136.4	123.2	123.4	125.4	138.7	123.5	125.3	126.7	134.2	119.8	120.0	123.7	136.6	125.0	125.6	127.1	136.2	120.1	121.8	124.3	145.5	143.9	141.7	141.1	163.5	159.9	159.0	159.1	154.9	144.8	146.9	148.5	246.4	234.0	246.2	233.8	248.4	239.9	248.9	242.9	247.9	244.8	135.6	120.4	124.6	124.3
December.....	141.3	165.6	158.5	157.6	135.0	128.6	129.0	130.4	129.6	120.6	121.6	122.8	132.0	124.8	124.5	127.0	126.7	116.2	116.8	120.6	129.0	122.8	123.0	125.4	127.3	117.3	118.9	120.7	138.5	142.7	141.4	139.6	163.2	158.4	159.0	158.2	153.1	142.7	145.1	145.5	245.1	233.8	244.4	232.3	247.1	239.6	248.1	242.9	247.0	244.4	128.0	116.4	120.2	120.8

Monthly Rainfall in Inches During 1908 in Various Places in Eastern Massachusetts.

PLACES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Framingham.....	3.24	4.22	3.67	1.75	5.41	0.71	3.43	4.36	0.96	2.52	0.89	2.95	34.14
Dam 4, Ashland.....	3.43	4.60	3.84	1.81	5.94	0.90	3.48	4.30	0.89	2.53	0.90	3.07	35.69
Cordaville.....	4.21	5.28	4.26	2.14	5.56	1.02	4.18	5.39	1.12	2.63	1.12	3.53	40.44
Lake Cochituate.....	3.33	4.30	3.62	1.80	4.58	0.82	3.91	3.98	0.77	2.37	0.85	2.70	33.03
Chestnut Hill, Reservoir.....	4.50	6.22	4.18	2.64	4.56	1.28	4.18	5.56	1.22	4.34	1.17	3.46	43.31
Spot Pond.....	3.48	4.27	3.26	2.41	3.81	0.78	3.40	3.97	0.62	3.66	1.04	2.65	33.55
Cambridge Observatory.....	3.55	3.60	2.81	1.31	4.00	1.25	3.34	4.01	0.83	3.45	0.81	2.70	31.66
Waltham, Boston Manufacturing Company.....	9.14	4.05	4.03	1.87	3.59	2.00	3.80	4.06	0.83	3.29	0.83	2.60	40.09
Lowell, Locks and Canals Company.....	3.20	4.96	2.71	1.96	4.19	0.93	3.04	4.29	0.34	2.57	1.14	3.03	32.36
Main Drainage Yard, 795 Massachusetts avenue.....	2.82	3.91	3.47	1.62	4.13	2.06	3.64	4.24	0.60	3.70	1.37	2.57	34.13
Average of above ten places.....	4.09	4.54	3.59	1.93	4.58	1.18	3.64	4.42	0.82	3.11	1.01	2.93	35.84

GENERAL STATISTICS.

BOSTON WATER DEPARTMENT.

Daily average amount used during year 1908 (gallons) .	98,379,300
Daily average amount used through meters during year 1908 (gallons)	22,557,600
Number of services February 1, 1909	95,045
Number of meters in service February 1, 1909	5,380
Number of meters under supervision February 1, 1909 .	118
Number of elevators under supervision February 1, 1909 .	584
Length of supply and distributing mains, in miles, February 1, 1909	753.17
Number of public hydrants in use February 1, 1909 . .	7,919
Yearly revenue from annual rates (assessed)	\$1,382,789.78
Yearly revenue from metered water (assessed)	\$1,260,363.18
Percentage of total revenue from metered water . .	47.7
Yearly expense of maintenance	\$551,773.02

CIVIL ORGANIZATION OF THE WATERWORKS, FROM THEIR COMMENCEMENT TO FEBRUARY 1, 1909.

WATER COMMISSIONERS.

NATHAN HALE,* JAMES F. BALDWIN,* THOMAS B. CURTIS.* From May 4, 1846, to January 4, 1850.

ENGINEERS FOR CONSTRUCTION.

JOHN B. JERVIS, of New York, Consulting Engineer. From May, 1846, to November, 1848.*

E. S. CHESBROUGH, Chief Engineer of the Western Division. From May, 1846, to January 4, 1850.*

WILLIAM S. WHITWELL, Chief Engineer of the Eastern Division. From May, 1846, to January 4, 1850.*

ENGINEERS HAVING CHARGE OF THE WORKS.

E. S. CHESBROUGH, Engineer. From November 18, 1850, to October 1, 1855.*

GEORGE H. BAILEY, Assistant Engineer. From January 27, 1851, to July 19, 1852.*

H. S. McKEAN, Assistant Engineer. From July 19, 1852, to October 1, 1855.*

JAMES SLADE, Engineer. From October 1, 1855, to April 1, 1863.*

N. HENRY CRAFTS, Assistant Engineer. From October 1, 1855, to April 1, 1863.

N. HENRY CRAFTS, City Engineer. From April 1, 1863, to November 25, 1872.

THOMAS W. DAVIS, Assistant Engineer. From April 1, 1863, to December 8, 1866.*

HENRY M. WIGHTMAN, Resident Engineer at Chestnut Hill Reservoir. From February 14, 1866, to November, 1870.*

A. FTELEY, Resident Engineer on construction of Sudbury river works. From May 10, 1873, to April 7, 1880.*

JOSEPH P. DAVIS, City Engineer. From November 25, 1872, to March 20, 1880.

HENRY M. WIGHTMAN, City Engineer. From April 5, 1880, to April 3, 1885.*

WILLIAM JACKSON, City Engineer. From April 21, 1885, to present time.

DESMOND FITZGERALD, Resident Engineer on Additional Supply. From February 20, 1889, to January 1, 1896.

After January 4, 1850, Messrs. E. S. CHESBROUGH, W. S. WHITWELL and J. AVERY RICHARDS were elected a water board, subject to the direction of a joint standing committee of the City Council, by an ordinance passed December 31, 1849, which was limited to keep in force one year; and in 1851 the Cochituate Water Board was established.

* Deceased.

COCHITUATE WATER BOARD.

Presidents of the Board.

THOMAS WETMORE, elected in 1851, and resigned April 7, 1856.†
 JOHN H. WILKINS, elected in 1856, and resigned June 5, 1860.†
 EBENEZER JOHNSON, elected in 1860, term expired April 3, 1865.†
 OTIS NORCROSS, elected in 1865, and resigned January 15, 1867.†
 JOHN H. THORNDIKE, elected in 1867, term expired April 6, 1868.†
 NATHANIEL J. BRADLEE, elected April 6, 1868, and resigned January 4 1871.†
 CHARLES H. ALLEN, elected January 4, 1871, to May 4, 1873.†
 JOHN A. HAVEN, elected May 4, 1873, to December 17, 1874.†
 THOMAS GOGIN, elected December 17, 1874, and resigned May 31, 1875.†
 L. MILES STANDISH, elected August 5, 1875, to July 31, 1876.†

Members of the Board.

THOMAS WETMORE, 1851, 52, 53, 54 and 55.†
 JOHN H. WILKINS, 1851, 52, 53, *56, 57, 58 and 59.†
 HENRY B. ROGERS, 1851, 52, 53, *54 and 55.†
 JONATHAN PRESTON, 1851, 52, 53 and 56.†
 JAMES W. SEAVER, 1851.†
 SAMUEL A. ELIOT, 1851.†
 JOHN T. HEARD, 1851.†
 ADAM W. THAXTER, Jr., 1852, 53, 54 and 55.†
 SAMPSON REED, 1852 and 1853.†
 EZRA LINCOLN, 1852.†
 THOMAS SPRAGUE, 1853, 54 and 55.†
 SAMUEL HATCH, 1854, 55, 56, 57, 58 and 61.†
 CHARLES STODDARD, 1854, 55, 56 and 57.†
 WILLIAM WASHBURN, 1854 and 55.†
 TISDALE DRAKE, 1856, 57, 58 and 59.†
 THOMAS P. RICH, 1856, 57 and 58.†
 JOHN T. DINGLEY, 1856 and 59.†
 JOSEPH SMITH, 1856.†
 EBENEZER JOHNSON, 1857, 58, 59, 60, 61, 62, 63 and 64.†
 SAMUEL HALL, 1857, 58, 59, 60 and 61.†
 GEORGE P. FRENCH, 1859, 60, 61, 62 and 63.†
 EBENEZER ATKINS, 1859.†
 GEORGE DENNIE, 1860, 61, 62, 63, 64 and 65.†
 CLEMENT WILLIS, 1860.†
 G. E. PIERCE, 1860.†
 JABEZ FREDERICK, 1861, 62 and 63.†
 GEORGE HINMAN, 1862 and 63.
 JOHN F. PRAY, 1862.†
 J. C. J. BROWN, 1862.
 JONAS FITCH, 1864, 65 and 66.†
 OTIS NORCROSS, *1865 and 66.†
 JOHN H. THORNDIKE, 1864, 65, 66 and 67.†
 BENJAMIN F. STEVENS, 1866, 67 and 68.
 WILLIAM S. HILLS, 1867.
 CHARLES R. TRAIN, 1868.†
 JOSEPH M. WIGHTMAN, 1868 and 69.†

* Mr. John H. Wilkins resigned November 15, 1855, and Charles Stoddard was elected to fill the vacancy. Mr. Henry B. Rogers resigned October 22, 1865. Mr. Wilkins was re-elected February, 1856, and chosen president of the Board, which office he held until his resignation, June 5, 1860, when Mr. Ebenezer Johnson was elected president; and July 2, Mr. L. Miles Standish was elected to fill the vacancy occasioned by the resignation of Mr. Wilkins. Otis Norcross resigned January 15, 1867, having been elected Mayor of the city. Benjamin James served one year, in 1858, and was re-elected in 1868. Alexander Wadsworth served six years, 1864-69, and was re-elected in 1872. Thomas Gogin resigned May 31, 1875. Charles E. Powers was elected July 15, to fill the vacancy occasioned by the resignation of Mr. Gogin.

† Deceased.

BENJAMIN JAMES,*1858, 68 and 69.†
 FRANCIS A. OSBORN, 1869.
 WALTER E. HAWES, 1870.†
 JOHN O. POOR, 1870.
 HOLLIS R. GRAY, 1870.
 NATHANIEL J. BRADLEE, 1863, 64, 65, 66, 67, 68, 69, 70 and 71.†
 GEORGE LEWIS, 1868, 69, 70 and 71.†
 SIDNEY SQUIRES, 1871.†
 CHARLES H. HERSEY, 1872.
 CHARLES H. ALLEN, 1869, 70, 71 and 72.†
 ALEXANDER WADSWORTH, *1864, 65, 66, 67, 68, 69 and 72.†
 CHARLES R. MCLEAN, 1867, 73 and 74.†
 EDWARD P. WILBUR, 1873 and 74.†
 JOHN A. HAVEN, 1870, 71, 72, 73 and 74.†
 THOMAS GOGIN, 1873, 74 and 75.*†
 AMOS L. NOYES, 1871, 72 and 75.
 WILLIAM G. THACHER, 1873, 74 and 75.†
 CHARLES J. PRESCOTT, 1875.†
 EDWARD A. WHITE, 1872, 73, 74, 75 and 76.†
 LEONARD R. CUTTER, 1871, 72, 73, 74, 75 and 76.††
 L. MILES STANDISH, 1860, 61, 63, 64, 65, 66, 67, 74, 75 and 76.††
 CHARLES E. POWERS, *1875 and 1876.††
 SOLOMON B. STEBBINS, 1876.†
 NAHUM M. MORRISON, 1876.††
 AUGUSTUS PARKER, 1876.††

* See note on preceeding page.

† Served until the organization of the Boston Water Board.

†† Deceased.

¹ BOSTON WATER BOARD.

ORGANIZED JULY 31, 1876.

* TIMOTHY T. SAWYER, from July 31, 1876, to May 5, 1879; and from May 1, 1882, to May 4, 1883.
 * LEONARD R. CUTTER, from July 31, 1876, to May 4, 1883.
 * ALBERT STANWOOD, from July 31, 1876, to May 7, 1883.
 * FRANCIS THOMPSON, from May 5, 1879, to May 1, 1882.
 WILLIAM A. SIMMONS, from May 7, 1883, to August 18, 1885.
 GEORGE M. HOBBS, from MAY 4, 1883, to MAY 4, 1885.
 JOHN G. BLAKE, from May 4, 1883, to August 18, 1885.
 WILLIAM B. SMART, from May 4, 1885, to March 18, 1889.
 * HORACE T. ROCKWELL, from August 25, 1885, to April 25, 1888.²
 THOMAS F. DOHERTY, from August 26, 1885, to May 5, 1890; and from May 4, 1891, to July 1, 1895.
 ROBERT GRANT, from April 25, 1888, to July 17, 1893.³
 PHILIP J. DOHERTY, from March 18, 1889, to May 4, 1891.
 * JOHN W. LEIGHTON, from May 5, 1890, to July 1, 1895.
 WILLIAM S. McNARY, from August 15, 1893, to November 5, 1894.³
 CHARLES W. SMITH, from January 23, 1895, to July 1, 1895.

¹ Under chapter 449 of the Acts of 1895 the Boston Water Board was abolished, and the Water Supply and Water Income Departments consolidated and placed under the charge of one Water Commissioner.

* Deceased.

² Died in office.

³ Resigned.

¹ WATER COMMISSIONERS.

CHARLES W. SMITH, from July 1, 1895, to January 20, 1896.³

JEREMIAH J. McCARTHY (Acting), from January 20 to February 1, 1896.

JOHN R. MURPHY, from February 1, 1896, to October 17, 1899.³

BENJAMIN W. WELLS (Acting), from October 17, 1899, to December 28, 1899.

* AUGUSTUS P. MARTIN, from December 28, 1899, to March 13, 1902.²

JAMES DONOVAN (Acting), from March 14 to March 17, 1902.

EUGENE S. SULLIVAN, from March 17, 1902, to January 11, 1906.³

WILLIAM JACKSON (Acting), from January 11, 1906, to March 1, 1906.

WILLIAM J. WELCH, from March 1, 1906, to April 27, 1908.³

WILLIAM E. HANNAN, from April 27, 1908, to present time.

Assistant Water Commissioners.

JEREMIAH J. McCARTHY, from July 1, 1895, to January 20, 1896.

EDWARD C. ELLIS, from February 17, 1896, to November 1, 1900.

* MELVIN P. FREEMAN, from February 7, 1900, to March 9, 1902.³

WILLIAM H. OAKES, from November 1, 1900, to March 9, 1902.³

EUGENE S. SULLIVAN, from March 10 to March 17, 1902.

JOHN J. LEAHY, from March 21, 1902, to March 1, 1906.

ISAAC ROSNOSKY, from March 10, 1902, to present time.

JOSEPH J. NORTON, from March 1, 1906, to March 26, 1908.

JAMES P. LENNON, from March 1, 1906, to March 26, 1908.

Chief Clerk of the Department.

WALTER E. SWAN.

General Superintendent Income Division.

JOSEPH H. CALDWELL.

In Charge of Distribution Division.

Assistant Commissioner, JAMES P. LENNON, to March 26, 1908.

Chief Clerk, GEORGE H. FINNERAN, from March 26, 1908, to present time.

City Engineer and Engineer of the Department.

WILLIAM JACKSON.

* Deceased.

¹ See note on preceding page.

² Died in office.

³ Resigned



ANNUAL REPORT
OF THE
WEIGHTS AND MEASURES DEPARTMENT
FOR THE YEAR 1908-1909.

Boston, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR, — In compliance with the requirements of the Revised Ordinances, I have the honor to submit the annual report of the Weights and Measures Department.

Appropriation and transfers for fiscal year 1908-1909 . . . \$22,992 12

CLASSIFICATION OF EXPENSES.

Salaries and laborers' pay	\$19,376 93
Horse board	2,086 00
Shoeing of horses	297 25
Medical attendance on horses	12 00
Printing	193 95
Stationery	60 17
Postage	20 00
Repairs on wagons	297 30
Repairs on harnesses	38 20
Marking acid and barium	153 65
Tools and hardware	128 85
Steel stamps and branding irons	13 50
Lead seals	19 50
Carried forward	<u>\$22,697 30</u>

<i>Brought forward</i>	\$22,697 30
Telephone service	120 00
Ferry tolls	16 50
Repairing standard and try scales	16 15
Advertising	47 18
Directory for 1908	7 50
Newspaper for office	6 00
Sealer's bond	7 50
Changing combination on safe	2 00
Wrapping paper	5 58
Typewriting	66 41
Total expenditures from February 1, 1908, to February 1, 1909	<u>\$22,992 12</u>

In May, 1908, Charles B. Woolley was appointed sealer and made head of the department in place of Thomas A. Mullen, Schoolhouse Commissioner, who was acting head from September, 1907, to May 4, 1908, incident to the resignation of Sealer Henry B. Lovering.

The force of the department, under normal conditions, consists of one sealer, ten deputy sealers, one helper and one laborer. The sealer and the ten deputy sealers are appointed by the Mayor; the helper and the laborer are appointed from the civil service list.

The headquarters of the department are in the basement of the Old Court House, and are small and inadequate for the large amount of sealing of milk jars which we are called upon to examine and seal. As long as the present law stands larger quarters are necessary and should be procured.

I find by conservative estimate that the milk bottle sealing service costs the city, per annum, nearly \$7,000, for which service there is no revenue derived. The daily consignments of milk bottles are so heavy that it requires the full time of three of the ten deputies. The sealing of glass jars used for the distribution of milk and cream has become a very serious problem for the department to solve. I am satisfied that a bill to charge a remunerative fee for that service would receive very little support, as the argument would be that it would impose an additional hardship upon the poorer class of our community, as the milk contractors certainly would raise the price to meet the extra expense incurred by them incident to a proper fee for the sealing service on account of the great amount of work accompanying it.

As the glass jars are now all machine made, with no perceptible variation whatever, the sealing process to me seems of no value, and our time which we employ in that work could be directed on much more important matters which vitally concern the welfare and protection of the public.

If the present law could be changed so as to allow merely odd lots to be tested and sealed, made from a particular mould bearing a particular number, at least every month, thus assuring the sealer that no change had been made in capacity, the public would be amply protected and the department saved the expenditure of a large amount of time that might be more judiciously employed.

Under the present fee system for outside sealing services (created by section 34, chapter 62 of the Revised Laws of 1902) this department has earned in revenue and paid over to the collector in the past twelve months \$7,695.80. This amount is \$2,283.99 more than has ever been derived in actual revenue in the history of the department, or since its creation. This result has been attained by the honest and efficient service performed by the outside deputies, who alone are the earning power of the department, some of whom have returned more fees than the equivalent of their salary.

In my opinion the schedule of prices for fees charged, which has governed this department from its inception, is too meager and wholly inadequate for the amount of service performed, and I hereby recommend an increase in fees which seems to me just and equitable, and which would increase the revenue nearly 50 per cent, to wit:

Railroad track scales, from 20 to 100 tons	\$5 00	each
Platform scales, 5,000 pounds capacity and over	3 00	"
Platform scales, under 5,000 pounds capacity	1 00	"
Computing scales, 20 pounds capacity and over	50	"
Computing scales, under 20 pounds capacity	25	"
All scales from 200 pounds to 500 pounds	50	"
Scales from 1 pound to 200 pounds	10	"
Weights	05	"
Dry measures	05	"
Liquid measures	05	"
Yard sticks	05	"

The total revenue under these prices would amount to nearly \$13,000. I am firmly convinced that this department being distinct and different from all other departments in this city should as near as possible be put on a self-sustaining basis. I think that in view of the expert service necessary to carry on the Weights and Measures Department the fees received should be based upon prices which would make it as near self-sustaining as possible.

It gives me pleasure to state that I believe I now have as good a working force as can be found in any private corporation or business firm.

I wish also to state that the suggestions of the Finance Commission, contained in their criticisms of the department

prior to my taking office, have been carried out (with but one exception) and are now made operative for the government of the department; as detailed below:

The inspection work of outside deputies is now submitted every morning on their daily reports to the sealer and recorded by the clerk, as well as indexed.

A system has been established whereby each deputy, in his own handwriting, records in a book furnished for that purpose all work performed by him. A duplicate of this is recorded by the clerk in another book, thereby keeping an accurate tally, not only on all work performed, but on the amount accomplished by each individual.

A receipt book in duplicate form has been provided, which is signed by the person delivering the consignment and also by the deputy receiving it, one receipt being retained by the dealer and its duplicate by the department, after which a record is made by the clerk in an invoice book provided for that purpose. This receipt book is for the purpose of verifying receipts of glass jars delivered from milk contractors to this department.

A book has been provided solely for the purpose of recording all weighings of coal, coke and charcoal, and up to the present time we have recorded some 200 weighings, with the names of the deputies making the tests.

We now have a daily report book, with duplicate sheets for each outside deputy; also a duplicate receipt book, one receipt being given to the merchant and the other to the sealer when the deputy makes his daily report, which is made on or before 9 a. m. every day. The deputy's work is also recorded in a record book by the clerk.

The deputies are now required to report at 9 a. m. on Saturdays and take up and carry on their work just the same as on other days. On many occasions, also, they have been detailed for special inspection work in the market districts Saturday afternoons and nights.

Since February 1, 1908, this department has had sixty-one cases in court. The offences charged were: Seven for short weight on coal, five for using short measures, eight for not having name and weight on bags of coal sold in quantities of 100 pounds or less and forty-one for not having scales on ice wagons. Of these sixty-one cases, forty-nine were convicted and fined, the total fines amounting to \$340.

We now have a book devoted solely to recording complaints, and a complete history of all such cases are kept. We also have a book in which is recorded all tagged scales, and another book for delinquents.



A COLLECTION OF WEIGHTS AND MEASURES THAT HAVE BEEN SEIZED AND CONDEMNED, NOW ON EXHIBITION IN THE OFFICE OF THE SEALER OF WEIGHTS AND MEASURES OF BOSTON.

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Acting upon the urgent solicitation of the Finance Commission to increase the revenue, I have been obliged to withhold inspections, the outcome of which are in many cases the product of prosecutions and convictions. But notwithstanding this necessary interruption we have had more cases in court and more convictions than have been recorded in this department for the past ten years.

Within the past year I have perfected an entirely new system of bookkeeping, introduced by my predecessor, which I believe is complete and applicable to this department, and which I am impressed cannot be criticised.

With the additional protection that has been given the department by virtue of the civil service classification of the sealer and his deputies, I feel that greater results will be attained in the coming fiscal year.

With the renewed assurance that it is the aim of the sealer to make the department a model in business efficiency, I submit the foregoing to show I have reason to hope that whatever misgiving with regard to the department may have existed in the past has been removed, and that it is now giving the best of service and is justly deserving of the respect and confidence of the public.

Respectfully submitted,

CHARLES B. WOOLLEY,
Sealer of Weights and Measures.

The system of testing and sealing of scales, weights and measures at the places of business where such scales, etc., are used gives general satisfaction. On the score of economy, however, many having such work to be done send their scales, measures, etc., to be tested at this office, thus lessening the revenue of the department, the law providing that work done therein be free of charge.

OPERATIONS OF THE DEPARTMENT FROM FEBRUARY 1, 1908,
TO FEBRUARY 1, 1909.

Amount of Work Performed in the Office from February 1, 1908, to February 1, 1909, for which no Fees are Charged.

Scales of all descriptions tested	1,959
Weights tested	2,554
Dry measures tested	2,129
Wet measures tested (including glass jars)	691,843
Yard sticks tested	324
Total number of pieces tested in the office	<u>698,809</u>

Portable platforms tested	165
Computing platforms tested	4
Spring balances tested	1,396
Computing spring balances	32
Trip scales tested	304
Counter balances tested	37
Butchers' beams or balances tested	21
Total number of scales tested	<u>1,959</u>

Scales tested and found correct	1,160
Scales tested and adjusted	85
Scales tested and tagged to be repaired	260
Scales tested that were repaired as ordered	421
Scales tested and condemned	33
Total number of scales tested	<u>1,959</u>

Weights tested and found correct	1,513
Weights found light and adjusted	963
Weights found heavy and adjusted	48
Weights tested and condemned	30
Total number of weights tested	<u>2,554</u>

Dry measures tested and found correct	2,090
Dry measures tested and condemned	39
Total number of dry measures tested	<u>2,129</u>

WEIGHTS AND MEASURES DEPARTMENT.

7

Wet measures, including glass jars, tested and found correct	685,651
Wet measures tested and adjusted	106
Wet measures tested and tagged to be repaired	407
Wet measures tested that were repaired as ordered	409
Wet measures, including glass jars, that were condemned	5,270

Total number of wet measures, including glass jars, that were tested	<u>691,843</u>
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Yardsticks tested and found correct	313
Yardsticks tested and condemned	11

Total number of yardsticks tested	<u>324</u>
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Outside Work for which Fees are Charged.

Scales 5,000 pounds to 150 tons tested	771
Platforms under 5,000 pounds tested	5,764
Platform computing scales tested	442
Dormants under 5,000 pounds tested	865
Spring balances tested	4,551
Spring balance computing scales tested	731
Trip scales tested	4,256
Counter balances tested	1,064
Butchers' beams or balances tested	92
Public weighers tested	10

Total number of scales tested	<u>18,546</u>
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Scales tested and found correct	13,828
Scales tested and adjusted	3,267
Scales tested and tagged to be repaired	1,034
Scales tested that were repaired as ordered	405
Scales tested and condemned	12

Total number of scales tested	<u>18,546</u>
---	---------------

Weights tested and found correct	50,363
Weights tested, found light and adjusted	2,750
Weights tested, found heavy and adjusted	319
Weights tested and condemned	100

Total number of weights tested	<u>53,532</u>
--	---------------

Dry measures tested and found correct	8,881
Dry measures tested and condemned	226

Total number of dry measures tested	<u>9,107</u>
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Wet measures tested and found correct	9,608
Wet measures tested and adjusted	93
Wet measures tested and condemned	207

Total number of wet measures tested	<u>9,908</u>
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Yardsticks tested and found correct	1,946
Yardsticks tested and adjusted	239
Yardsticks tested and condemned	178

Total number of yardsticks tested	<u>2,363</u>
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Recapitulation.

Total number of scales tested from February 1, 1908, to February 1, 1909	20,505
Total number of weights tested from February 1, 1908, to February 1, 1909	56,086
Total number of dry measures tested from February 1, 1908, to February 1, 1909	11,236
Total number of wet measures, including glass jars, tested from February 1, 1908, to February 1, 1909	701,751
Total number of yardsticks tested from February 1, 1908, to February 1, 1909	2,687
Total number of tests of all descriptions	<u>792,265</u>

Earnings of Department.

Amount of earnings from February 1, 1908, to February 1 1909	\$7,695 80
Amount uncollected, due the department	62 57
Balance paid to the City Collector	<u>\$7,633 23</u>
Unpaid bills of previous year paid to City Collector	60 18
Rebate from the Boston Elevated Railroad Company for car tickets	5 55
Received for the sale of one horse	50 00
Total amount received and paid to the City Collector to be credited to the Department of Weights and Measures	<u>\$7,748 96</u>

Coal Reweighing while in Transit.

Coal reweighings while in transit	50
Coal reweighings found under weight	7
Coal weighings sold in bags of less than 100 pounds	28
Number who did not have name and weight marked on bags	8

Prosecutions.

Cases in court	61
Short weight of coal	7
Not having name and weight on bags sold in quantities of less than 100 pounds	8
Using short measures	5
Having no scales on team to weigh ice	41
Total number of cases in court	<u>61</u>
Convicted and fined	49
Convicted and placed on file	5
Failed to appear and warrants issued	7
Total amount of fines	\$340

Respectfully submitted,

CHARLES B. WOOLLEY,
Sealer of Weights and Measures.



ANNUAL REPORT
OF THE
WIRE DEPARTMENT
FOR THE YEAR 1908-1909.

OFFICE OF THE COMMISSIONER OF WIRES,
11 WAREHAM STREET, BOSTON, February 1, 1909.

HON. GEORGE A. HIBBARD,
Mayor of the City of Boston:

SIR,—I herewith submit report in which is shown the appropriation and expenditures of the Wire Department and the work performed from February 1, 1908, to January 31, 1909, inclusive.

As provided for in chapter 249 of the Acts of 1898, the underground district for 1909 has been prescribed, same being Blue Hill avenue from Dudley street to a point one hundred feet south of Cheney street, Roxbury street from Washington street to Columbus avenue, Guild row from Roxbury street to Washington street, and Harrison avenue from Zeigler street to Warren street, a total distance of ten thousand three hundred and fifty-seven (10,357) feet.

These streets were selected on account of the existing conditions demanding some radical action relative to the wiring equipments or else the removal of same from overhead; also to the fact that it would cause a proper and needed extension of existing underground construction.

Chapter 249, Acts of 1898, expires with the year 1909, but provisions for the placing of wires underground similar to that

called for by said act is provided in chapter 347 of the Acts of 1908 for the years up to and including the year 1919.

This new act also provides for the granting of permits for the necessary terminal poles in connection with the prescribed underground streets by the Commissioner of Wires.

This legislation has resulted in allowing terminal pole locations to be granted, which has permitted the clearing of certain of the prescribed streets of poles which previously had necessarily remained on account of lack of terminal facilities of companies owning said poles.

The department, which in past years has been somewhat handicapped on account of there being no penalty for failure on the part of contractors and others to comply with the law requiring notification of wiring and apparatus for light, heat and power purposes installed within buildings, has been materially assisted by the enactment of chapter 339 of the Acts of 1908, which went into effect April 1; and which provides a penalty of not less than \$10 nor more than \$50 for each failure to send notification required by law.

During the year there has been no fire caused by wiring approved by the department, and it is gratifying to report that there has been but one death during the year caused by electricity.

I desire to again call attention to the fact that the very valuable records of this department are not properly protected and a fireproof vault should be provided.

Yours respectfully,

JAMES E. COLE,

Commissioner of Wires.



Plate No. 1.—Junction of Dorchester avenue and Freeport street, showing existing overhead conditions.

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EXTERIOR DIVISION.

The prescribed underground district for 1908 comprised that portion of Harrison avenue between Northampton street and Zeigler street, a distance of two thousand six hundred (2,600) feet; and the entire length of Warren street, Roxbury, from Washington street to Grove Hall, a distance of seven thousand nine hundred (7,900) feet, making a total distance of ten thousand five hundred and forty (10,540) feet, which distance lacks by twenty (20) feet the two miles as authorized under chapter 249, Acts of 1898.

In that portion of Harrison avenue prescribed there were standing February 1, 1908, twenty-three (23) poles, owned as follows: eighteen (18) by the New England Telephone and Telegraph Company, four (4) by the American Telephone and Telegraph Company and one (1) by the Edison Electric Illuminating Company.

In Warren street, there were standing February 1, 1908, one hundred thirty-one (131) poles, owned as follows: seventy-nine (79) by the Edison Electric Illuminating Company and fifty-two (52) by the New England Telephone and Telegraph Company.

Attached to the poles or crossing overhead on Harrison avenue, between Northampton street and Zeigler street, there was about fifty-one thousand (51,000) feet of wire, owned by the Edison Electric Illuminating Company, the New England Telephone and Telegraph Company and the American Telephone and Telegraph Company.

Attached to the poles or crossing overhead on Warren street, between Washington street and Grove Hall, there were about one hundred ninety-seven thousand (197,000) feet of wire, owned by the Edison Electric Illuminating Company, the New England Telephone and Telegraph Company, the Postal Telegraph-Cable Company, the West End Street Railway Company and the Fire Alarm Branch (B. F. D.).

The above figures give a total of two hundred forty-eight thousand (248,000) feet, or over forty-six (46) miles of wire over these streets ordered cleared of wires and poles during the year 1908. This does not include the trolley or span wires of the West End Street Railway Company.

The customary attention has been given to the underground and overhead construction, both new and old; to the attachment of the wires of one company to the poles of another; to new pole locations, which are selected by the engineers of the various companies desiring locations, in company with a representative of this department, before they petition the Board of Aldermen; to the erection of derricks and stretching of derrick guys and to the moving of buildings, where electric wires are apt to be damaged or workmen are liable to be endangered by coming into electrical connection with same through wire guys or other conductors; to the stretching of all private wires over public streets or avenues outside the underground districts, permission for which should be first granted by the Board of Aldermen, but which we find now and then put up without that permission and without notice to this department; in these cases the owners were requested to remove the wires or comply with the law with reference to the same.

As a result of careful attention given to general construction, poles, etc., many defects were found, a large majority of which, as the figures in the tables will show, have been corrected during the year.

During the last few months the Edison Electric Illuminating Company in conjunction with the Lamp Division of the Street Department has been at work installing the Tungsten lamps in the outlying sections of the city. In many of these cases the new electric lamp has taken the place and location of the old naphtha street lamps.

In some cases these lamps are attached to carrying poles, and, in others, new chestnut poles, twenty to twenty-five feet in height, have been erected to support them, and these poles are not included in the figure given of poles standing.

This work has required special inspection, as every proposed location is submitted (as are all new lamp locations) to this department for approval electrically, before the work is commenced; then after lamps are installed and wires run and connected up the work is again inspected for approval or disapproval as to the general construction.

By the authority given the Commissioner of Wires in chapter 347, Acts of 1908, thirty-one (31) terminal pole locations have been granted the companies, thereby permitting them to clear the underground districts of 1906 and 1907 of all overhead wires and poles; and the district of 1908 is all ready to be cleared of all poles and wires as soon as the

weather is favorable to making the necessary changes over from one system to the other and the removal of the poles standing.

The increase in the notices received of new work during the past year is largely due to the increased use of the telephone in the residential districts.

The following table will show the overhead work for the year from February 1, 1908, to January 31, 1909, inclusive:

Permits granted by the Board of Aldermen to set poles	80
Number of poles included in the above orders	272
Permits granted by the Board of Aldermen to remove poles	62
Number of poles included in the above orders	203
Number of streets or avenues included in above orders	103
Number of new poles set in new locations	121
Number of poles removed	266
Number of poles reset, straightened, renewed etc.	922
Number of new pole locations selected	278
Number of poles now standing	14,648
Amount of dead wire removed by Wire Department (in feet)	308,452
Defect notices sent out	2,510
Number of defects included in these notices	5,362
Number of defects corrected	5,081
Notices of new work and special inspections	11,544
Amount of wire removed by owners (in feet)	3,523,457

The Board of Aldermen have also granted the following orders which come under the jurisdiction of this department, inasmuch as they pertain in one way or another to the overhead or underground electric wires.

Police signal post locations	1
Fire alarm post and test box locations	7
Extensions of time on permits previously issued	10
Attachments of one company's wires to poles of another	4
To stretch overhead wires across street	6
To lay underground conduits across street	1
Extension of street railway tracks, etc.	20
Erection of derricks, stretching guy ropes, etc.	20
Moving buildings, etc.	6
Transfer of poles from one company to another	8
Total	83

The following companies and individuals have laid new conduits, extended present service or added to their underground cables during the past year:

For Electric Light and Power Purposes.

Boston Elevated Railway Company.
Boston Consolidated Gas Company.
Boston & Maine Railroad.
Charlestown Gas and Electric Company.
Edison Electric Illuminating Company.

For Telephone, Telegraph, Signalling and Other Purposes.

Boston Automatic Fire Alarm Company.
Boston Auxiliary Fire Alarm Company.
Boston District Messenger Company.
Boston Low Tension Wire Association.
Fire Alarm Branch (Boston Fire Department).
Holmes Electric Protective Company.
Mutual District Messenger Company.
New England Telegraph Company.
New England Telephone and Telegraph Company.
Police Signal Service (Boston Police Department).
Quincy Market Cold Storage Warehouse Company.
Schoolhouse Commission (City of Boston).
Western Union Telegraph Company.

During the year the various companies doing underground work have opened seventy-three (73) different streets and avenues within the city limits for the purpose of building new conduits, or extending and enlarging their existing conduits; thirty-eight (38) of these were in the original underground district or the congested portion of the city lying north of Dover and Berkeley streets, while the remaining thirty-five (35) were scattered throughout the rest of the city and suburbs.

The electrical approvals of the department for opening the streets for underground electrical work during the year numbered one thousand two hundred and twenty-eight (1,228); one thousand four hundred and twenty-one reports have been made by the district inspectors on this work, which called for over eight thousand four hundred (8,400) inspections.



Plate No. 2. — Junction of Dorchester avenue and Adams street, showing existing overhead conditions.

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Character of Cables Used by the Various Companies.

COMPANY.	Kind of Insulation.	Sizes.
Boston Automatic Fire Alarm Co..	Rubber	2, 4, 6, 10, 25 and 30 conductor.
Boston Auxiliary Fire Alarm Co...	Rubber	4 conductor.
Boston Consolidated Gas Co.	Rubber	2 and 3 conductor, No. 4, 6 and 8.
Boston District Messenger Co.	Rubber	2 conductor.
Boston Elevated Railway Co.	Rubber	500,000 C.M. to 2,000,000 C.M.
Boston & Maine Railroad	Varnished cambric.	0000 and No. 2.
Charlestown Gas and Electric Co..	Rubber, varnished cambric	0000, No. 2 and No. 4.
Edison Electric Illuminating Co...	Rubber and paper..	No. 6 to 1,000,000 C.M.
Fire Alarm Branch (B. F. D.)	Rubber	6, 10 and 19 conductor.
Holmes Electric Protective Co.	Rubber	20 and 50 conductor.
Mutual District Messenger Co.	Rubber	10, 50 and 150 conductor.
New England Telegraph Co.	Paper	75 conductor.
New England Tel. and Tel. Co.	Paper	15 pair to 600 pair.
Quincy Market Cold Storage Warehouse Co.	Rubber	No. 0 and No. 8.
Schoolhouse Commission	Rubber	No. 2, 4, 6 and 8 conductor.
Western Union Telegraph Co.	Paper	200 conductor.

Table Showing the Underground Electric Service of Boston, by yearly installation, 1894-1908.

YEAR.	Feet of Conduit Installed.	Feet of Single Duct Installed.	Feet of Cable Installed.	Number of Manholes Installed.	Number of Services Installed.	Feet of Edison Three-wire Tube Installed.	Number of Distribution Boxes (E. E. I.)
1894*	213,160	1,762,401	1,341,731	1,322	3,286	273,473	381
1895	131,128	537,935	1,086,957	555	894	33,233	5
1896	146,759	711,081	1,088,012	585	1,108	37,165	11
1897	154,580	742,392	853,794	782	1,099	46,481	40
1898	112,254	835,180	1,202,914	556	947	13,463	6
1899	122,603	763,636	1,613,871	516	912	17,843	14
1900	145,163	816,968	784,488	582	1,035	34,136	24
1901	115,318	797,674	979,371	422	824	24,762	37
1902	87,396	529,383	784,032	327	1,000	28,496	42
1903	67,614	506,452	557,419	268	895	20,057	16
1904	46,539	365,162	486,474	176	642	13,080	12
1905	62,095	423,699	597,766	282	794	14,129	7
1906	84,465	627,428	534,675	366	976	14,959	9
1907	41,652	207,150	485,526	184	703	11,511	8
1908	41,374	258,815	417,228	220	747	7,045	8
Totals.	1,572,100	9,885,356	12,814,258	7,143	15,862	589,833	620

* Includes underground service prior to formation of Wire Department in 1894.

Table Showing the Underground Work for the Year 1908.

COMPANY.	Feet of Conduit.	Feet of Duct.	Feet of Cable.	Number of Manholes.	Number of Services.
Boston Automatic Fire Alarm Company. ....	.....	.....	7,400	.....	.....
Boston Auxiliary Fire Alarm Company. ....	.....	327	675	.....	3
Boston Consolidated Gas Company. ....	.....	227	528	.....	8
Boston District Messenger Company. ....	.....	.....	100	.....	.....
Boston Elevated Railway Company.	14,977	98,394	73,862	82	77
Boston & Maine Railroad.	130	720	850	2	.....
Boston Low Tension Wire Association.	2,962	6,553	.....	9	13
Charlestown Gas and Electric Company.	339	757	1,247	3	5
Edison Electric Illuminating Company.	17,936	127,337	223,776	98	473
Fire Alarm Branch (B. F. D.).	25	793	11,920	1	15
Holmes Electric Protective Company. ....	.....	.....	1,102	.....	.....
Mutual District Messenger Company. ....	.....	.....	4,227	.....	.....
New England Telegraph Company. ....	.....	.....	10,076	.....	.....
New England Tel. and Tel. Co.	2,860	19,222	77,409	20	147
Police Signal Service (B. P. D.).	85	85	.....	1	1
Quincy Mkt. Cold Storage Warehouse Co.	80	150	700	.....	1
Schoolhouse Commission.	1,010	1,235	2,335	.....	1
Western Union Telegraph Company.	970	3,015	1,021	4	3
Totals.	41,374	258,815	417,228	220	747

NOTE. — Main and feeder tube or the solid system distribution boxes of the Edison Electric Illuminating Company are not included in the above figures. There were 7,045 feet of tube laid during the year, of this 695 feet is reckoned as conduit; 8 new distribution boxes were installed.

Table Showing Overhead Electrical Condition of Boston and Some of the Work Accomplished from 1894 to 1908, Inclusive.

YEAR.	Number of Poles in District.	Amount of Over-head Wire in Feet in the District. Approximate.	Number of Poles Set in City.	Number of Poles Standing in City.	Number of De-feet Notices Sent Out.	Number of De-feet Notices.	Number of De-feet Reported Corrected.	Number of Poles Removed.	Number of Fix-tures Removed.	Amount of Wire Removed by Owners.	Amount of Wire Removed by Wire Depart-ment.	Total Amount of Wire Removed in Feet.
1894....	333	5,174,550	.....	12,398	.....	4,674	.....	*73	217	1,814,650	881,150	2,695,800
1895....	94	9,916,860	.....	12,979	.....	15,889	.....	*94	643	5,332,600	2,740,425	8,073,025
1896....	182	13,719,670	.....	14,267	1,760	11,445	.....	*138	325	5,500,481	1,995,350	7,545,831
1897....	134	2,721,550	.....	15,000	1,940	7,596	.....	.....	774	7,993,712	1,663,650	9,657,362
1898....	.....	.....	424	15,355	3,693	15,963	3,029	*52	661	2,034,420	836,100	2,871,720
1899....	No	district this	year.	.....	3,279	9,800	1,924	*40	825	.....	348,275	348,275
1900....	129	500,000	1,116	.....	2,147	5,041	4,270	215	535	20,160	272,150	292,310
1901....	54	157,200	1,148	14,019	4,409	11,215	9,576	332	375	1,168,293	276,690	1,444,983
1902....	183	350,988	†738	14,607	3,419	8,256	9,410	150	162	3,976,124	263,325	4,239,449
1903....	136	196,895	639	14,999	2,576	6,688	7,704	247	138	1,720,468	264,370	1,984,838
1904....	191	1,003,200	211	14,954	1,615	5,431	4,579	256	141	2,931,237	251,790	3,183,027
1905....	175	273,000	158	14,968	1,456	3,986	3,355	144	60	1,818,859	268,915	2,087,774
1906....	225	746,000	130	15,000	1,554	3,513	3,623	98	32	3,773,420	381,750	4,155,170
1907....	123	297,000	38	14,793	1,693	3,887	4,052	245	7	4,442,947	281,860	4,724,807
1908....	154	248,000	121	14,648	2,510	5,362	5,081	266	.....	3,523,457	308,452	3,831,909
Totals..	2,113	35,304,913	4,723	14,648	32,051	118,746	56,603	2,350	4,895	46,050,828	11,034,252	57,136,280

NOTE.— No official survey was made of the pole lines throughout the entire city until 1900–1901; this accounts for the somewhat incomplete and possible inaccuracy of these records for the years previous to 1900.
* Inside the prescribed underground district for this year only: number in rest of city not recorded.
† A different figure appears in the annual report for this year (998 poles being reported set and 270 removed); this was due to the record of permits issued, rather than the returns of work actually done, having been used.

Table Showing the Amount and Distribution of Boston's Electrical Power, January 31, 1906.

	Total Rated Horse Power of Boilers.	Total Rated Horse Power of Engines.	Capacity in Incandescent Lamps.	Capacity in Arc Lamps.	Number of Motors.	Horse Power of Motors.	Number of Stations.
Boston Elevated Railway Company	28,770	54,450	44,670	496	4,956	153,860	8
Edison Electric Illuminating Company.....	22,743	44,840	635,233	9,851	7,455	28,030	13
Charlestown Gas and Electric Light Co. ....	.....	.....	.....	.....	54	261	.....
Boston Consolidated Gas Company.....	1,250	3,100	74,000	600	76	472	1
Block Plant Electric Light Company.....	273	417	5,250	.....	3	16	1
Sudbury Building.....	202	230	719	3	33	171	1
Steam and Power Company.....	267	295	4,000	400	41	214	2
Hecht Building Plant.....	300	200	2,400	240	32	234	1
* Isolated Plants.....	62,049	39,399	205,439	3,681	1,074	9,235	276
Totals.....	115,854	142,931	971,711	15,271	13,724	192,493	303

* The capacity of generators for isolated plants in kilowatts, 21,287.

Table Showing the Amount and Distribution of Boston's Electrical Power, January 31, 1907.

	Total Rated Horse Power of Boilers.	Total Rated Horse Power of Engines.	Capacity in Incandescent Lamps.	Capacity in Arc Lamps.	Number of Motors.	Horse Power of Motors.	Number of Stations.
Boston Elevated Railway Company.....	30,914	59,170	60,728	569	4,911	191,307	10
Edison Electric Illuminating Company.....	23,659	47,575	686,358	9,581	8,439	30,839	13
Charlestown Gas and Electric Light Co.....	.....	.....	.....	.....	80	392	....
Boston Consolidated Gas Company.....	1,250	3,100	80,000	600	101	469	1
Block Plant Electric Light Company.....	273	417	5,250	.....	3	16	1
Sudbury Building.....	202	230	727	2	25	114	1
Steam and Power Company.....	267	295	4,000	400	60	294	2
Hecht Building Plant.....	300	200	2,400	240	32	234	1
* Isolated Plants.....	64,921	42,792	221,415	3,771	1,297	10,651	298
Totals.....	121,786	153,779	1,060,878	15,163	14,948	234,316	327

* The capacity of generators for isolated plants in kilowatts, 21,087.

January 31, 1908.

Boston Elevated Railway Company.....	39,138	64,950	66,149	625	5,401	226,607	10
Edison Electric Illuminating Company.....	25,456	71,200	749,087	9,169	9,200	35,953	13
Charlestown Gas and Electric Light Co.....	475	140	.....	.....	80	503	....
Boston Consolidated Gas Company.....	1,500	3,100	96,170	604	121	486	1
Block Plant Electric Light Company.....	273	417	5,250	.....	3	16	1
Sudbury Building.....	202	230	656	.....	30	140	1
Steam and Power Company.....	267	295	4,000	400	60	294	2
Hecht Building Plant.....	300	200	2,400	240	32	234	1
* Isolated Plants	64,859	44,471	223,000	3,869	1,472	11,428	301
Totals.....	132,470	185,003	1,146,712	14,907	16,399	275,661	330

* The capacity of generators for isolated plants in kilowatts, 22,251.

January 31, 1909.

Boston Elevated Railway Company.....	41,244	74,950	73,703	685	6,439	271,204	10
Edison Electric Illuminating Company.....	32,642	87,200	824,478	8,813	9,859	38,626	13
Charlestown Gas and Electric Light Co.....	475	140	.....	.....	100	575	....
Boston Consolidated Gas Company.....	1,625	3,200	101,227	604	132	570	1
Block Plant Electric Light Company.....	273	417	5,250	.....	3	16	1
Sudbury Building.....	202	230	688	.....	30	140	1
Steam and Power Company.....	267	295	4,000	400	68	301	2
Hecht Building Plant.....	300	200	2,400	240	32	234	1
* Isolated Plants	69,734	49,768	237,909	3,866	1,688	14,986	319
Totals.....	146,762	236,400	1,249,655	14,608	18,351	326,652	348

* The capacity of generators for isolated plants in kilowatts, 25,702.

Table Showing the Increase of Electrical Output from 1894 to 1908, Inclusive.

	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Incandescent lights.....	219,653	285,155	324,271	357,838	424,443	499,906	660,882
Arc lights.....	6,598	7,915	8,172	9,584	13,094	12,796	12,830
Motors.....	4,036	4,682	?	6,447	7,070	7,779	9,037
Horse power of motors..	?	?	?	48,641	84,002	90,890	102,562
	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Incandescent lights.....	739,779	782,711	792,059	874,539	971,711	1,060,878	1,146,712
Arc lights.....	14,055	13,365	14,001	14,441	15,271	15,163	14,907
Motors.....	9,480	11,632	12,344	13,250	13,724	14,948	16,399
Horse power of motors..	145,565	164,625	168,500	179,910	192,493	234,316	275,661

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Plate No. 3.— Hampden street, north from Eustis street (with wires).



Plate No. 4. — Hampden street, north from Eustis street (without wires).

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INTERIOR DIVISION.

It is not necessary to make comparisons between the days when electricity first began to be a potent factor for light, heat and power purposes and the present, to illustrate the rapid and constant increase in demand for electrical power, the increase in equipment to meet the demand, and the consequent increase in the duties of the Wire Department.

It is but five years ago that the annual report of this department noted the installation (completed in 1904) of a 5,000 kilowatt Turbo-Generator at the Edison Electric Illuminating Company's L Street Station, South Boston. This was well worth special mention, as it not only represented a new type of apparatus, but at that time it was the largest generator in this city and one of the largest in the country, there being but two others equal and none exceeding same in capacity. This generator was later re-rated at 7,500 kilowatt capacity. Since that time, three other Turbo-Generators of a rated capacity of 7,500 kilowatt each have been installed at the L Street Station. The exigencies of the demand and the interest of efficiency has resulted, however, in the replacing of the first mentioned generator with a 12,000 kilowatt Turbo-Generator, which was put in operation the last of the year 1908, and two more 12,000 kilowatt machines have been contracted for, to be installed as soon as practicable and replace two of the 7,500 kilowatt machines at present in service.

In addition to the above, the Edison Electric Illuminating Company have increased the capacity of two of their substations by the installation in each of 2,000 kilowatt motor generators and there have been installed four 1,000 kilowatt motor generators at their third station, Atlantic avenue, to be used for emergency service to reinforce L Street Station in case of accident, and they are at present building a new sub-station at the corner of Prince and Salem streets, this station to be used to distribute direct current to the underground network in vicinity, also to be used as a point of distribution for the alternating current service to and through Charlestown.

During the year many important changes have been made by the Boston Elevated Railway Company at their power stations. An extensive addition has been made to their Lincoln Power Station and two additional 2,700 kilowatt generators have been installed, a 2,700 kilowatt generator has been installed at their Charlestown Power Station, also a 2,700 kilowatt generator at their Harvard Station, extensive changes have been made in their switchboard equipments,

combustible floors in several of their stations have been replaced with fire-proof floors and other fireproofing measures have been taken.

The advent of the new "Tungsten" incandescent lamps which have been introduced into Boston during the past year has been the cause of a large amount of work to the interior division in addition to that which it would ordinarily have had to contend with. There have been about 60,000 of these lamps installed during the year, the greater portion of the same replacing existing lamps and necessitating more or less changes in existing wiring.

This has necessarily resulted in the inspection of a large amount of old wiring, which, were it not for the conditions arising in connection with the introduction of the "Tungsten lamps," might not have received that attention, as the requirements of new work inspections are such that with the exception of the monthly inspections of theatres and the inspection of halls as required by chapter 450 of the Acts of 1904, and the inspection of the electrical equipments of our large department and other stores, a systematic inspection of old wiring is impossible with the facilities at hand.

During the year fires for which three or more alarms were given were responded to and all fires reported by the Fire Department, police or other interested parties as caused or supposed to have been caused by electrical wiring or apparatus have been carefully investigated and reported upon.

Accidents to persons in connection with wiring or electrical apparatus have also been the subjects of careful investigations. Only a very small proportion of the fires attributed by the daily press to electric wires are found upon investigation to be due to that cause. This is not remarkable, however, as usually there is no opportunity before the matter is printed for either the papers' representatives or the proper authorities to make a proper investigation as to cause of fire, and provided the cause is not plainly evident it seems to be the custom to report the cause as electrical for want of better information.

Of the twenty-three fires in buildings found upon investigation to have been due to electrical causes, eleven were very slight and entailed no insurance loss. The other twelve fires caused an insurance loss of nineteen thousand two hundred and seventy-six dollars and ninety-eight cents (\$19,276.98).

The two most serious fires with insurance losses of \$8,344.55 and \$4,125.02 were in oil warehouses, the lighting equipments of which, in addition to that deterioration incident to age, had suffered deterioration due to nature of business for which premises were used.

The third largest loss, \$3,166.55, was due to a combination of lighting wiring and dampness, the latter being the result of a leaky roof, a loss of \$1,724.00 was attributed to a cross between electric lighting and telephone wires within building, and fires with insurance losses of \$581.95, \$560, \$387, \$164, \$98.81, \$55.10, \$35, and \$35 were attributed respectively to hot metal from blown fuse falling upon inflammable goods, grounding of rheostat, with consequent short circuit, short circuit (due to dampness) between wires run in paper conduit, defective operation of motor, incandescent lamp left in contact with combustible material, short circuit in a cutout cabinet, defective rheostat, and a short circuit between service wires.

There was one case during the year where a large quantity of current entered a building over a gas pipe, thence over a water pipe to ground, with consequent damage to piping system.

Of the fifteen accidents to persons that came to the attention of the department during the year but one was fatal.

Nine of the accidents were to employees of the companies owning and operating systems in connection with which accidents occurred, three were injured by a fallen trolley wire, one was injured by flash of short circuit caused by cutting into a low potential service cable with an adze, one was to a passenger on an elevated train, who received slight burns from flash of short circuit at a switch, while the fatal accident was to a thirteen year old boy who climbed to a place where he should not have been and reached up and grasped a live high potential arc circuit wire.

With the exception of the fatal accident, none of the accidents was serious.

The following is a complete summary of the work of the Interior Division for the year ending January 31, 1909:

Notices of new work received	11,044
Buildings in which wiring was completely examined, ...	1,475
Incandescent lights examined	1,123,626
Arc lights examined	6,059
Motors examined	5,997
Total horse power of motors examined	20,197
Services examined	675
Inspections made	24,624
Defects reported	1,776
Defects corrected	1,231
Other defects in process of correction	—

During the year there have been sixty-five fires or accidents to property, the origin of which was traced to electricity.

Fires in interior of buildings	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	23
Fires on outside walls of buildings	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Fires at bridges	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Fires on poles	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5
Miscellaneous (exterior)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33
Miscellaneous (interior)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
																66

Table Showing the Number and Classification of Fires, etc., Due to Electrical Causes, from 1894 to 1908, Inclusive.

	1894.*	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Fires on outside of buildings...	4	7	14	11	22	6	5	8	3	2	5	4	1	....	2
Fires in the interior of buildings.	27	27	22	29	28	31	29	22	18	32	23	20	14	18	23
Fires on poles.....	5	4	3	3	6	1	7	10	3	2	5	3	2	5	5
Bridge fires.....	....	6	2	1	4	2	3	1	1	3	3	4	4	7	1
Deaths.....	....	....	3	3	....	3	4	6	2	....	3	2	2	7	1
Injuries.....	11	17	13	16	11	16	4	21	13	9	15	17	12	13	14
Manhole explosions.....	1	3	2	5	....	5	1	5	5	1	3	3	2	4	....
Miscellaneous.....	12	27	26	45	22	7	20	33	12	12	40	25	36	38	35

* Record shown for 1894 is for five months only.

The following is a record of isolated plants in operation in this city:

Number of plants,	319.
“ boilers,	667, total horse power, 69,734
“ engines,	587, “ “ 49,768
“ generators,	576, “ k.w. capacity, 25,701
“ motors,	1,688, “ horse power, 14,986
“ incandescents,	237,909.
“ arcs,	3,866.

The record of new plants installed and inspected is as follows:

Number of plants,	27.
“ boilers,	48, total horse power, 6,934
“ engines,	47, “ “ 7,309
“ generators,	57, “ k.w. capacity, 4,421
“ motors,	372, “ horse power, 4,076
“ incandescents,	20,329.
“ arcs,	81.

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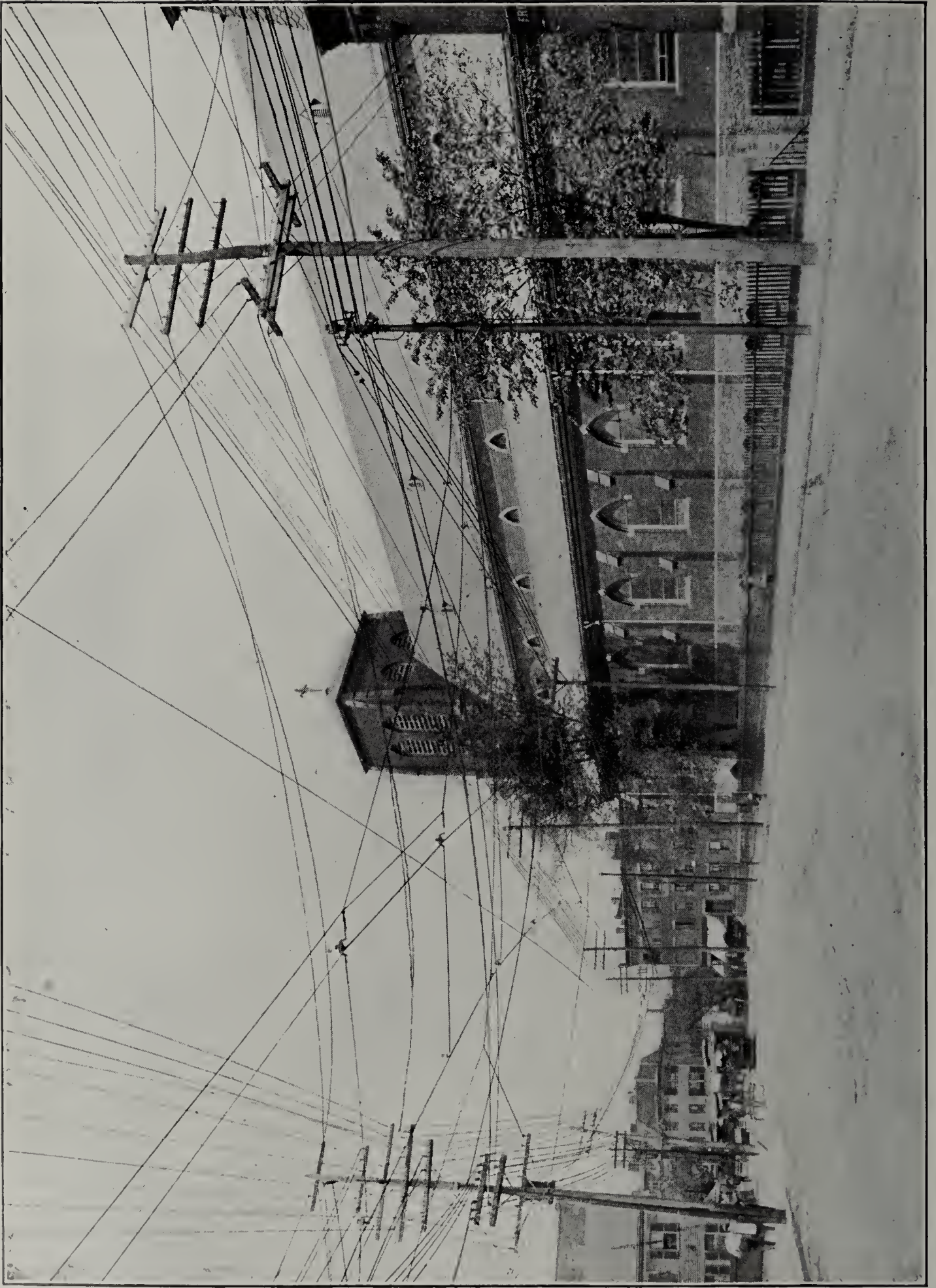


Plate No. 5. — Dudley street, from junction of Blue Hill avenue (with wires)



Plate No. 6.—Dudley street, from junction of Blue Hill avenue (without wires)

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During the year ending January 31, 1909, there were fourteen old plants inspected, the equipment of which was as follows:

Number of boilers,	35,	total horse power,	3,591
“ engines,	27,	“ “	2,558
“ generators,	29,	“ k.w. capacity,	1,633
“ motors,	125,	“ horse power,	903
“ incandescents,	17,505.		
“ arcs,	106.		

The record of plants, the operation of which was discontinued during the year, is as follows:

Number of plants,	9.		
“ boilers,	9,	total horse power,	845
“ engines,	11,	“ “	780
“ generators,	12,	“ k.w. capacity,	213
“ motors,	59,	“ horse power,	68
“ incandescents,	2,598.		
“ arcs,	20.		

Table Showing Inspection of Interior Wiring of Buildings, etc., from 1894 to 1901, Inclusive.

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Notices of new work received...	1,428	3,984	4,383	4,799	5,355	5,749	5,859	9,107
Number of buildings, wiring completely examined.....	173	359	395	473	451	567	570	692
Incandescents lights examined...	69,035	123,136	118,679	128,857	125,458	151,046	316,074	422,182
Arc lights examined.....	1,083	2,934	2,835	2,396	2,396	2,495	5,697	12,882
Motors examined.....	272	776	908	1,121	1,027	1,225	1,922	3,275
Total horse power of motors examined.....	840	83,566	3,247	3,739	5,681	6,967	11,150	16,444
Defects reported.....	610	4,890	9,505	2,318	1,661	2,369	2,274	2,349
Defects corrected.....	406	3,608	8,737	1,452	926	1,846	1,622	1,928
Services examined.....				1,988	1,283	1,115	1,176	1,654
Inspections made.....					9,472	12,476	12,609	23,111
Isolated plants in this city.....						203	271	281
Isolated plants inspected.....								34

Table Showing Inspection of Interior Wiring of Buildings, etc., from 1902 to 1908, Inclusive.

	1902.	1903.	1904.	1905.	1906.	1907.	1908.
Notices of new work received.....	10,272	8,590	7,983	9,317	10,412	9,465	11,044
Number of buildings, wiring completely examined.....	496	487	524	590	1,173	1,158	1,475
Incandescent lights examined.....	394,234	330,050	611,778	686,231	716,137	966,615	1,123,626
Arc lights examined.....	10,882	2,716	5,738	6,028	4,469	5,909	6,059
Motors examined.....	3,006	2,465	2,966	3,006	4,619	5,477	5,997
Total horse power of motors examined..	12,531	11,151	11,790	11,667	21,725	23,347	20,197
Defects reported.....	1,810	1,274	1,073	1,289	1,425	1,945	1,776
Defects corrected.....	1,165	938	673	905	966	1,190	1,231
Services examined.....	1,174	819	571	595	780	773	675
Inspections made.....	23,962	19,635	19,224	23,588	27,286	28,265	24,624
Isolated plants in this city.....	283	274	274	276	298	301	319
Isolated plants inspected.....	6	20	14	15	90	79	41

FIRES AND MISCELLANEOUS TROUBLES DUE TO ELECTRICITY,
FEBRUARY 1, 1908, TO JANUARY 31, 1909.

February 7, 12.53 a. m., Box 466, Sullivan square; yard of the Boston Elevated Railway Company System; fire in elevated car No. 0112, caused by wire of electric car heater open-circuiting; severe arcing taking place and fire being communicated to woodwork of car.

February 15, about 4 p. m., Canterbury street, just west of Hyde Park avenue; horse belonging to Lawrence J. Hurmans, residing at No. 253 Ashland street, West Roxbury, came in contact with a broken guy wire which had fallen to street and was killed; guy wire was crossed with wire of an A. C. high potential circuit; severe storm in progress at the time.

February 15, during severe rain and wind storm, the following troubles in connection with overhead wires occurred:

About 4. p. m., two wires of primary alternating circuit burned off and fell to street at the corner of Vernon street and Shawmut avenue.

About 5.45 p. m., wires were reported on fire at the corner of Washington and Poplar streets, Roslindale; same was caused by wires of a primary alternating circuit swinging in contact with gooseneck of street lamp.

About 5.50 p. m., wires were reported burning at Eighth street, South Boston; same was the result of an iron wire becoming crossed with an arc circuit.

About 6.30 p. m., corner Fourth and M streets, South Boston; tree fire caused by arc circuit in contact with tree.

About 6.35 p. m., trouble was reported with wires at Charles River Bridge, West Roxbury; same was found to be due to cross between an arc circuit and a guy wire.

February 26, about 8.15 p. m., Commerce street and Atlantic avenue; members of the Fire Department called on account of burn out in arc light cables just above where they left stand-pipe from underground; severe storm in progress at the time.

February 26, 9.35 p. m., Box 428, Chelsea Bridge, Charlestown; fire at base of wooden pole located just south of South Draw, as a result of breakdown in insulation of arc light lead cables which ran up side of pole; damage slight; severe storm in progress at the time.

February 26, between 10 and 11 p. m., severe burn out in high potential cables in manhole of the Edison Electric Illuminating Company on L street, near entrance to the L-street Station of the Edison Electric Illuminating Company.

March 9, 8.08 a. m., Box 714, No. 80 East Concord street, Boston University School of Medicine; break down occurred in insulation of a branch circuit of rubber insulated wire, run in old type of interior conduit or paper tubing on inside of an outside brick wall, same being due to dampness; insulation of wire and the tubing was ignited, and fire was communicated to woodwork in the immediate vicinity; insurance loss, \$387.

March 12, 6.03 p. m., Box 16, No. 84 State street; fire occurred in storeroom in basement containing letter files, etc.; same resulting from heat of a 32-candle power lamp igniting some papers upon which the lamp had been placed while lighted; considerable damage resulted to letters, records, etc., and about ten feet of shelving was destroyed; insurance loss, \$98.81.

April 10, 9.57 a. m., Box 18, Adams square Subway Station; air pipe running along side of platform, then through into the new Washington Street Subway, became electrically charged by a trolley wire which was being installed in the new subway, making simultaneous contacts with air pipe and with live wire of lighting circuit. Arcing and flashing at various points along pipe at subway platform ignited sawdust and refuse material beneath platform; damage slight.

April 15, about 7.30 p. m., Kenilworth street; slight tree fire as a result of branches of same being in contact with wires of high potential primary A. C. circuit; raining hard at the time; report of trouble received from Fire Department.

April 15, Medway and Adams streets, about 7.30 p. m.; slight tree fire caused by branches of tree and high potential arc circuit being in contact; raining hard at time of trouble; report received from Fire Department.

April 15, about 7.30 p. m., Washington and Roslin streets, Dorchester; slight tree fire caused by branches of tree and high potential arc circuit wire being in contact at the time; raining hard at time of trouble; report received from Fire Department.

April 30, 11.41 p. m., Box 245, pole W. D. 6242; breakdown in insulation of one conductor of a high potential A. C. circuit resulted in arcing and burning at point where current left conductor to pole; severe rain storm in progress at the time.

May 8, 12.19 a. m., Box 645; during a severe rain storm, break down occurred in insulation of arc circuit of the Edison Electric Illuminating Company, used for street lighting; break down occurred just above where wires left underground terminal pipe on pole in Central square, also at base of first

are lamp pole on Meridian street Bridge on East Boston end; no damage except to wires and loss of service.

During unusually severe wind and rain storms which occurred May 30 and 31 numerous electrical troubles occurred, the following coming to our attention:

May 30, 10 p. m., near corner of Amory and School streets, two wires of high potential alternating circuit came in contact with tree, burned off and fell to street.

May 30, about 11 p. m., Church street, West Roxbury; two wires of high potential A. C. circuit in contact with tree, burned off and fell to ground.

May 30, 11.30 p. m., Amory and Boylston streets; two wires of high potential A. C. circuit in contact with tree, burned off and fell to ground.

May 30, 10.23 p. m., an alarm from Box 556, given on account of wire of high potential A. C. circuit at the corner of Rockwood and Pond streets, Jamaica Plain; burned off and fell to ground.

May 30, 11.23 p. m., Mt. Pleasant avenue and Dudley street; tree fire due to wires of high potential A. C. circuit being in contact with tree; members of Hook & Ladder 4 responded on still alarm.

May 31, 8 p. m., corner Harvard street and Harvard avenue, Dorchester; tree fire caused by high potential arc circuit being in contact with tree; reported by Engine 18.

May 31, 8 p. m., River street, between Morton and Temple streets, Dorchester; tree fire due to high potential arc circuit being in contact with same; reported by Ladder 6.

May 31, 8.03 p. m., opposite 8 Minot street, Dorchester; tree fire due to high potential arc circuit being in contact with tree; reported by Engine 20.

May 31, 7.42 p. m., Box 192, near corner Dorchester avenue and Romsey street, Dorchester; limb of tree broke off and fell on two high potential arc circuits, short-circuiting same, with resulting arcing and burning.

May 31, 12.02 a. m., Box 192, corner Pleasant street, and Savin Hill avenue; tree fire caused by wires of high potential A. C. circuit in contact with tree.

May 31, 7.55 p. m., Box 917, opposite 251 Hancock street; tree fire caused by wire of high potential arc circuit being in contact with tree.

May 31, 8 p. m., Dorchester avenue, near Centre street; tree fire due to wire of high potential arc circuit being in contact with tree.

June 25, 10.02 p. m., Box 43, No. 162 Tremont street; fire on fifth floor, consisting of the burning of insulation on wires

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Plate No. 7. — Dudley street, west from Cottage street (with wires).



Plate No. 8.— Dudley street, west from Cottage street (without wires).

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in an iron cutout cabinet; with the exception of smoking of ceiling damage was confined to contents of cutout cabinet; insurance loss \$55.10.

July 7, 9.15 a. m., Automatic Alarm, No. 39 Central Wharf; electrolytic action caused a hole in gas pipe elbow and escaping gas from same was ignited probably by an arc at fuse terminal, a loose connection being found at same.

July 16, 3 p. m., Box 77, No. 81 Wareham street; slight fire in basement, due to the overheating of the rheostat used in connection with the freight elevator motor; insurance loss \$35.

July 22, 1.28 a. m., at pole corner Northampton street and Harrison avenue; during rainstorm, insulation on arc circuit broke down at a point just above where lead cable left underground pipe terminal; no damage except to cables; members of Fire Department called on still alarm.

August 15, 10.45 a. m., No. 70 Broad street; unused metal water conductor stored between floor timbers in basement came in contact with live terminals of electric service cutout, conductor at the same time being in contact with gas pipe; hole melted in gas pipe and gas which issued from same was ignited; extinguished by occupants without damage other than that done to pipe.

August 24, 9.32 a. m., Battery street, in front of Police Station No. 8; slight fire in manhole due to burn-out in underground electric mains.

August 31, 10.35 p. m., No. 225 Commonwealth avenue; burn-out occurred in underground electric lighting cable entering this building; cable destroyed but no fire communicated by same.

On August 7, at 5.23 p. m., an alarm was given from Box 37 for a fire in building No. 198 Milk street and No. 99 Central street, occupied by Masury Young, oils and paints; this fire was not reported as due to electrical causes, but as a result of examination made by this department it is our opinion that, while it could not be absolutely proven, fire was probably due to a short circuit on electric light wiring as a result of defective condition of same; insurance loss, \$4,125.02.

August 29, about 10 a. m., third floor, No. 77-79 Washington street North; slight fire caused by an overheated electric hand iron which had been left in circuit the night previous, when work was discontinued for the day; no trouble occurred during the night as current was cut out of the building, but when current was turned on again in the morning iron heated until finally fire was communicated to table upon which it stood and goods upon same; an automatic

alarm was given for this fire; current supplied by plant in building where trouble occurred.

September 11, 5.49 a. m., Box 23, No. 41 Cambridge street; underground service of the Edison Electric Illuminating Company short circuited and one wire burned off at point just inside basement wall; no damage except to service.

September 12, 11.03 a. m., corner St. Cecilia and Belvidere streets; burn-out occurred in underground service cable of the Edison Electric Illuminating Company at point just inside basement wall; beyond slight burning and charring of adjacent woodwork no damage except to cable; Engine 33 and Hook and Ladder 13 called on still alarm.

September 23, 3.55 p. m., Box 95, No. 320-322 Boylston street; fire consisted of the burning of insulation of electric lighting cable in elevator well feeding incandescent lamps in elevator car; caused by defective splice in same being made by some person unknown, splice opening up and arc between two ends of wire igniting insulation on cable; fire confined to the insulation on cable; current supplied by system of the Edison Electric Illuminating Company.

October 10, 7.40 a. m., Box 16, No. 55 Blackstone street; small fire on fourth floor caused by defective operation of 10-horse power motor used to operate freight elevator; insurance loss, \$164.

October 28, about 5.17 p. m., insulation broke down on wires of two arc circuits at point where they were crossed and in contact on pole corner Southampton street and Dorchester avenue, with consequent arcing and flashing; damage, which was confined to wires, was slight.

October 26, corner Dorchester avenue and Ellet street, Dorchester; arc lamp pole electrically charged resulted in slight shocks to passers-by.

October 26, about 11.20 p. m., corner of Adams and Arcadia streets, Dorchester; tree fire caused by high potential arc circuit in contact with small limb of tree; as a result of arcing and flashing limb of tree was burned sufficiently to cause same to break and fall to the ground; during this as well as the two preceding mentioned troubles a severe rainstorm was in progress.

October 27, 3.49 p. m., Box 38, followed later by second and third alarms, No. 67 Long Wharf; fire probably caused by short circuit due to the deterioration of insulation of circuit from oil drippings on wires; insurance loss, \$8,344.55.

November 3, in front of No. 256 Massachusetts avenue; burn-out occurred in underground mains of the Edison Electric Illuminating Company current passing over pipe containing

same (it being solid tube system) to service gas pipe with which Edison tube was in contact; a hole was melted in gas pipe at point of contact.

November 4, about 5.31 p. m., Kneeland street, between South and Lincoln streets; hydrant cover was lifted and turned over on the ground, a slight explosion occurring as a result of burn-out in underground electric mains.

November 4, 6.35 p. m., Centre street, opposite Gardner street; tree fire caused by high potential arc circuit in contact with same.

November 9, 9.40 p. m., Talbot avenue and Brent street, Dorchester; members of Fire Department called on account of arcing wires; trouble was due to series arc circuit wires coming in contact with guy wire of the Boston Elevated Railway Company; wet night.

November 10, 9.40 p. m., opposite No. 51 Copeland street; tree fire reported by Fire Department; wires of primary alternating circuit in contact with twigs of tree caused arcing and flashing at points of contact; no damage; wet night.

November 30, 1.51 a. m., Box 13, No. 171 North street; breakdown occurred in insulation of underground service wires at point just where they left service box; no damage except to service and slight charring and burning of wood-work in the vicinity; insurance loss, \$35.

December 5, No. 572-8 Washington street, 9.45 p. m.; engine 26 called on still alarm for a slight fire due to arcing at a defective 10 ampere switch; damage confined to switch and wooden block upon which it was mounted.

December 5, No. 163 Tremont street, 6.58 p. m.; Engine 26 was called on still alarm; fire which started at telephone connecting board was evidently due to cross between telephone and electric lighting system of building; insurance loss \$1,724.

December 14, about 3.30 p. m., No. 90 Tremont street; the end of a wire which had been cut off and left bare of insulation came in contact with a metal rod lying on floor, the other end of rod being in contact with support to cash-carrier system, which system was also supported by wires run to screw eyes in ceiling. From one of these screw eyes wire used to support a streamer of holly was run to another screw eye in ceiling which was grounded. When rod before mentioned was kicked and rolled in contact with wire and upright to cash system, current passed over same through cash system and wires before mentioned, melting off wire carrying holly streamer, hot metal dropping on to and burning holes in fourteen shirt waists.

December 19, 6.52 a. m., Box 50, basement of No. 107

Kingston street; defective motor on fifth floor of building caused fuse in basement to melt, hot metal dropping on cotton goods and igniting same; insurance loss \$581.95.

December 22, 10.08 a. m., Box 36, No. 257 Washington street; fire occurred in house on roof in which was located elevator motor and machinery; resistance used in connection with this motor became grounded, resulting in short circuit; insulation of wires was ignited and fire was communicated to oil, etc., around motor; insurance loss \$560.

December 22, No. 160 Tremont street; on this date evidence of slight fire was found; sheathed backing for two sets of shelving at point where 1½-inch gas pipe passed through same showed evidence of burning and charring; gas pipe was in contact with water pipe just beyond this point. The union used in gas pipe at point just before contact with water pipe was made was so badly affected by heat that packing melted and gas was leaking. Trouble was caused by a heavy flow of electric current which entered over gas pipe and passed to water pipe, there being trouble in underground electric system in street.

December 30, 8.19 p. m., Warren street, about opposite Holborn street, Roxbury; tree fire due to high potential A. C. circuit wires being in contact with tree; no damage.

January 2, 1909, 2.49 a. m., corner St. Cecilia and Scotia streets; stable of E. O. Fitch & Co.; Fire Department called on still alarm on account of burn-out in underground service cable of the Edison Electric Illuminating Company entering basement of building; no damage except to cable.

January 5, 12.15 p. m., No. 564 Washington street; metal reel upon which moving picture film was rolled was brought in contact with blades of a switch; short circuit resulted, and film was ignited; no damage except to film, which was destroyed.

January 20, 8.34 p. m., Nos. 27-29 Leather square; members of Fire Department were called on still alarm on account of burn-out in series arc light cable at point just above where same left standpipe on division wall at said numbers; no damage except to cable.

January 21, 8.17 p. m., Box 89; fire in one story brick building on Clarendon street, known as the Augustus Lowell Building, and owned and occupied by the Massachusetts Institute of Technology; leaky roof permitted water to fall on electric lighting wires, insulation on one of the wires becoming so affected that leakage of current and electrolytic action took place, corrosion thereby ultimately causing wire to open at that point and an arc between ends of wire ignited

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Plate No. 9. — Columbus avenue, north from Roxbury street (with wires).



Plate No. 10. — Columbus avenue, north from Roxbury street (without wires)

rubber insulation on wire, fire being communicated to surrounding woodwork; insurance loss \$3,166.55.

January 23, 9.50 p. m., Blue Hill avenue, near Woodcliff street; slight fire on pole due to the grounding of current from high potential arc circuit of the Edison Electric Illuminating Company.

ACCIDENTS TO PERSONS DUE TO ELECTRICITY.

April 12, about 4.45 p. m., Fannie Rosenberg, residing at No. 41 Billerica street, Boston, Mr. I. Gilberg, residing at No. 263 Chelsea street, East Boston, and Louis Herman, residing at No. 61 Main street, Charlestown, received injuries from a fallen trolley wire on Meridian Street Bridge, they being on the East Boston side of the drawbridge at the time. The falling of trolley wire was due to conditions existing as one of the results of the conflagration in progress in Chelsea at the time.

July 8, about 2.30 p. m., B. Austin, residing at No. 9 Gustin street, South Boston, struck with his adze an electric service cable of the Edison Electric Illuminating Company, just inside the basement wall at No. 19 Eastern avenue. As a result of short circuit thus caused, Mr. Austin was painfully burned about the face.

July 23, about 1.44 a. m., James Brown, an employee of the Boston Elevated Railway Company, while at work on iron work of the extension of the State Street Station platform of the Atlantic avenue Elevated system, came in contact with the live third rail and received severe burns on the left side and the inner side of the upper portion of the left arm, on the inside or palm of the left hand, and on the right knee.

September 11, at about 8.15 p. m., Charles A. Roach, thirteen years of age, residing at No. 132 Braintree street, Allston, climbed up on one of the iron trusses of the Everett Street Bridge, and standing on the upper chord of truss reached up and placed his hand in contact with live electric light wire of the Boston Consolidated Gas Company, feeding street lamp on said bridge, receiving severe shock and burns, causing him to fall to bridge. Accident resulted fatally, the boy dying at the City Hospital Sunday afternoon, September 13.

October 14, Arthur H. Nelson, head lineman in charge of one of the emergency crews of the Boston Elevated Railway Company, while at work in connection with a track switch installation at corner of Dudley and Washington streets, came in contact with trolley wire circuit and grounded part of switch installation, receiving shock causing him to fall from ladder

to the street. In addition to severe shaking up, as a result of fall, he received cuts to his head, but was not incapacitated for duty.

September 23, Daniel H. McNeil, a carpenter in the employ of the Boston Elevated Railway Company, was severely burned about the face and hands as a result of short circuit at Tower C, near the North Station of the elevated system of the Boston Elevated Railway company. Short circuit was the result of grounded air pipe and feeder tap being brought into direct contact where feeder tap was bolted to third rail.

November 11, Charles C. Buchanan, an oiler in the employ of the Edison Electric Illuminating Company, while attempting to install a fuse at their third station on Atlantic avenue, made a short circuit, causing severe burns to right hand.

November 20, A. L. McCormack, a wireman in the employ of the Boston Elevated Railway Company, received severe burns to the face as a result of switch blade which he was opening at the time coming in contact with grounded oil pipe.

November 20, James Dawley, a steel worker in the employ of the Boston Elevated Railway Company, while at work on platform extension at Rowe's Wharf Station, Atlantic avenue, brought a bar in contact with third rail and the iron elevated structure at the same time, receiving severe burns as a result of short circuit thereby caused.

November 20, William F. Hall, a steel worker in the employ of the Boston Elevated Railway Company, while at work on extension platform of the Northampton Street Station, slipped while tightening a bolt with an iron wrench, bringing wrench in contact with live third rail. As a result of short circuit thereby caused, he received burns to the wrist and slight injuries to face.

December 19, at about 10.20 a. m., Mr. L. W. Packard, an employee of the Laboratory Department of the Edison Company, came in electrical connection with 6,900 volt circuit while he was at work in back of switchboard. He received a severe shock, rendering him unconscious for a short time, also sustained severe burn on inside of right wrist and a burn on back of left hand.

January 17, 1909, at about 7.35 a. m., Guy L. Gardner, an employee of the Boston Elevated Railway Company, and John G. Selberg, a passenger, while on an elevated train between Thompson square and City square received burns as a result of short circuit at switch controlling current for car. Injuries not serious.

AVE

Walter St

St

Walter

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King St

ROXBURY

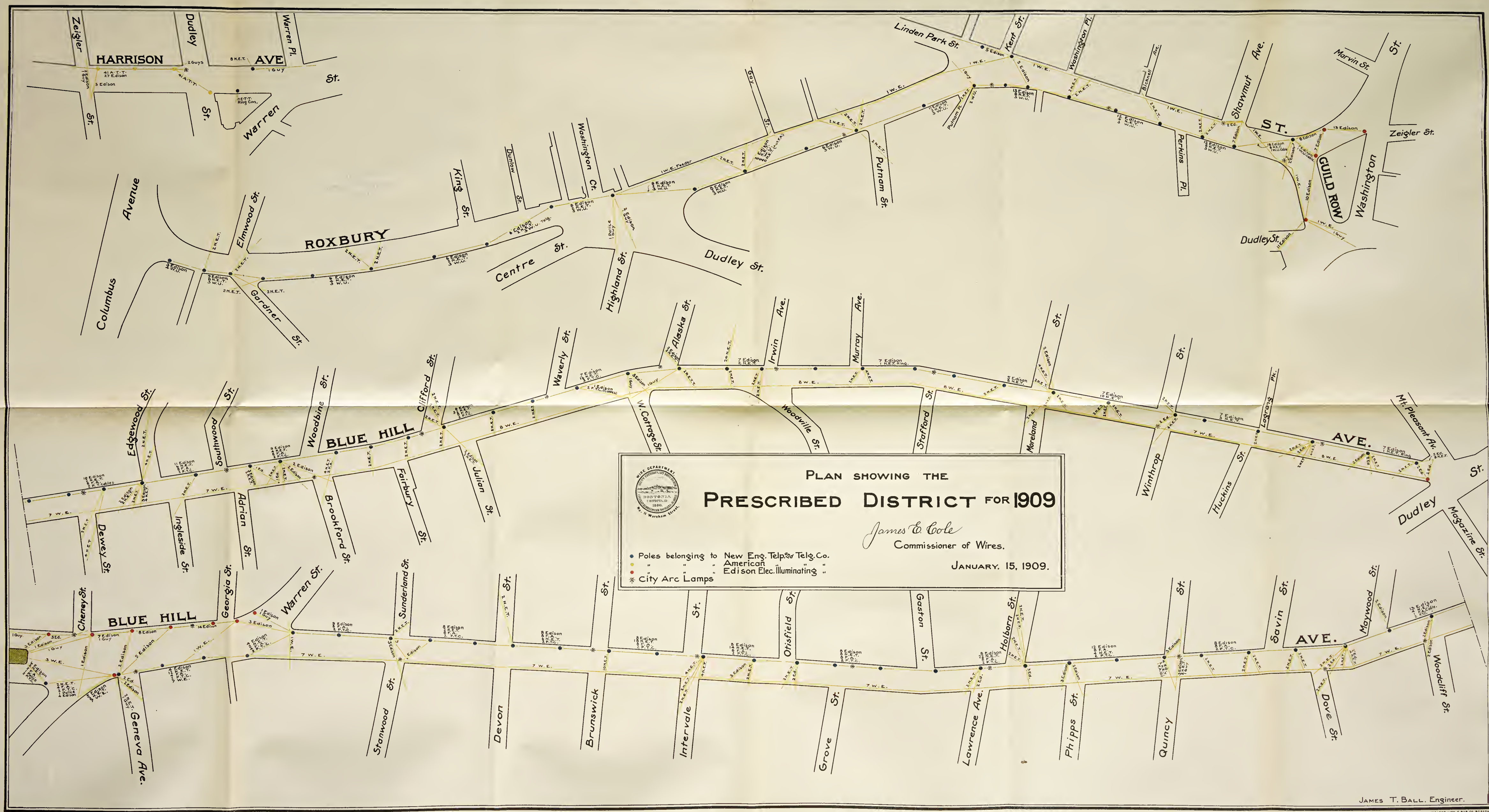
Clayton St

Garfield St

CLUE RILEY

St

St



WIRE DEPARTMENT
BOSTON
EDISON
1880
100 N. WASHINGTON STREET

PLAN SHOWING THE
PRESCRIBED DISTRICT FOR 1909
James C. Cole
Commissioner of Wires.
JANUARY, 15, 1909.

• Poles belonging to New Eng. Tel. & Tel. Co.
• " " " " American
• " " " " Edison Elec. Illuminating
* City Arc Lamps

LIST OF WIRE DEPARTMENT EMPLOYEES

JANUARY 31, 1909.

No.	Occupation.	Salary per Annum.
1	Commissioner	\$5,000 00
1	Chief Inspector	2,000 00
1	Chief Clerk	1,600 00
2	Engineers	1,500 00
4	Inspectors	1,500 00
1	Clerk and Inspector	1,400 00
1	Clerk	1,200 00
9	Inspectors	1,200 00
6	Inspectors	1,100 00
5	Inspectors	1,000 00
2	Drivers	1,000 00
1	Stenographer	1,000 00
1	Stenciller	1,000 00
1	Deputy Inspector	800 00
1	Clerk and Deputy Inspector	700 00
1	Telephone Operator	600 00

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STATEMENT OF DEPARTMENT APPROPRIATION AND

EXPENDITURES FROM FEBRUARY 1, 1908, TO

JANUARY 31, 1909, INCLUSIVE.

Appropriation	\$55,000 00
Income from sale of car tickets	72 15
Total amount available	<u>\$55,072 15</u>

EXPENDITURES.

Salaries and wages:	
Patrick J. Kennedy, Commissioner to January 13, 1908, inclusive	\$180 56
William Jackson, Acting Commissioner from January 14, 1908, to June 14, 1908, inclusive, paid as City Engineer.	
James E. Cole, Commissioner from June 15, 1908, Employees	3,123 27
Horse keeping	46,749 95
	1,335 13
Carried forward	<u>\$51,388 91</u>

<i>Brought forward</i>	.	.	.	.	.	.	.	\$51,388 91
Traveling expenses	.	.	.	.	.	.	.	1,129 47
Printing	.	.	.	.	.	.	.	1,030 93
Stationery	.	.	.	.	.	.	.	429 69
Telephone service	.	.	.	.	.	.	.	396 77
Instruments, tools, etc.	.	.	.	.	.	.	.	128 44
Office expenses	.	.	.	.	.	.	.	68 00
Boston Fire & Police Notification Co.	.	.	.	.	.	.	.	50 00
Advertising	.	.	.	.	.	.	.	40 24
								\$54,662 45
Balance in Treasury	.	.	.	.	.	.	.	409 70
								<u>\$55,072 15</u>

LIST OF PROPERTY OF THE WIRE DEPARTMENT.

- 1 High Potential Testing Apparatus.
- 1 Transformer.
- 1 Test Board, capacity 220 volts, 300 amperes.
- 1 Auxiliary Test Board, capacity 220 volts, 150 amperes.
- 1 Reflecting Galvanometer, Condenser, Telescope, Scales, etc.
- 1 Set Standard Resistance Coils.
- 1 Lamp Stand and Scale.
- 1 Shunt Coil.
- 1 Set Double Connector Posts.
- 1 Discharge Key.
- 1 Reversing Key.
- 1 Electrostatic Voltmeter, No. 70,647.
- 1 1,500-volt Direct Current Voltmeter, No. 3,438.
- 1 300-volt Weston Direct Current Voltmeter, No. 3,317.
- 1 300-volt Weston Direct Current Voltmeter, No. 6,020.
- 1 300-volt Weston Direct Current Voltmeter, No. 15,459.
- 1 300-volt Weston Direct Current Voltmeter, No. 15,455.
- 1 300-volt Weston Portable Direct Current Voltmeter, No. 15,456.
- 1 300-volt Weston Alternating and Direct Current Voltmeter, No. 1,044.
- 1 15-volt Weston Direct Current Voltmeter, No. 4,717.
- 1 500-ampere Weston Direct Current Ammeter, No. 2,428.
- 1 150-ampere Weston Direct Current Ammeter, No. 926.
- 1 50-ampere Weston Direct Current Ammeter, No. 2,381.
- 1 1,500-mil-ampere Weston Direct Current Mil-Ammeter, No. 2,433.
- 1 200-ampere T. & H. A. C. Ammeter, No. 29,421.
- 1 15-ampere T. & H. A. C. Ammeter, No. 21,507.
- 1 15-ampere Weston Direct Current Ammeter, No. 8,426.
- 1 Queen Testing Set, No. 389.

- 1 Standard Resistance Coil with Wheatstone Bridge.
 - 1 Generator, 50,000 ohms.
 - 1 Bichloride of Silver Battery, 150 cells.
 - 4 Bichloride of Silver Batteries, each 60 cells.
 - 2 Horses.
 - 2 Express Wagons.
 - 3 Business Wagons.
 - 4 Sets of Harnesses.
 - 5 Robes.
 - 7 Blankets.
 - 2 Cameras (complete).
 - Miscellaneous tools used in connection with overhead construction.
 - Draughting instruments.
-

DESCRIPTION OF PLATES.

Plate No. 1.—Is a reproduction of a photograph of a section of the Dorchester District known as Glover's Corner, or the junction of Dorchester avenue and Freeport street, showing the condition of the streets in a portion of the city where poles and overhead electric wires have not been removed.

Plate No. 2.—Is a reproduction of another photograph in the same section, at Fields Corner, or the junction of Dorchester avenue and Adams street, showing the same conditions as exist in the first picture and also showing a large apartment house nearly surrounded with these overhead electric wires.

Plate No. 3.—Is a reproduction of a photograph showing that portion of Hampden street north from Eustis street (1906 district), taken before the poles and overhead wires had been removed, showing a line of poles on each side of the street, heavily laden with overhead electric wires.

Plate No. 4.—Is a reproduction of a photograph taken from the same point as No. 3 after all poles and wires were removed.

Plate No. 5.—Is a reproduction of a photograph showing that portion of Dudley street west from Blue Hill avenue (1906 district), taken before the poles and overhead wires had been removed from the street.

Plate No. 6.— Is a reproduction of a photograph taken from the same point as No. 5 after all poles and overhead wires were removed.

Plate No. 7.— Is a reproduction of a photograph showing another portion of Dudley street (1906 district) west from Cottage street, taken before the poles and overhead wires had been removed from the street.

Plate No. 8.— Is a reproduction of a photograph taken from the same point as No. 7 after all poles and overhead wires were removed.

Plate No. 9.— Is a reproduction of a photograph showing that portion of Columbus avenue north from Roxbury street (1907 district), taken before the poles and overhead wires had been removed from the street.

Plate No. 10.— Is a reproduction of a photograph taken from the same point as No. 9 after all poles and overhead wires were removed.

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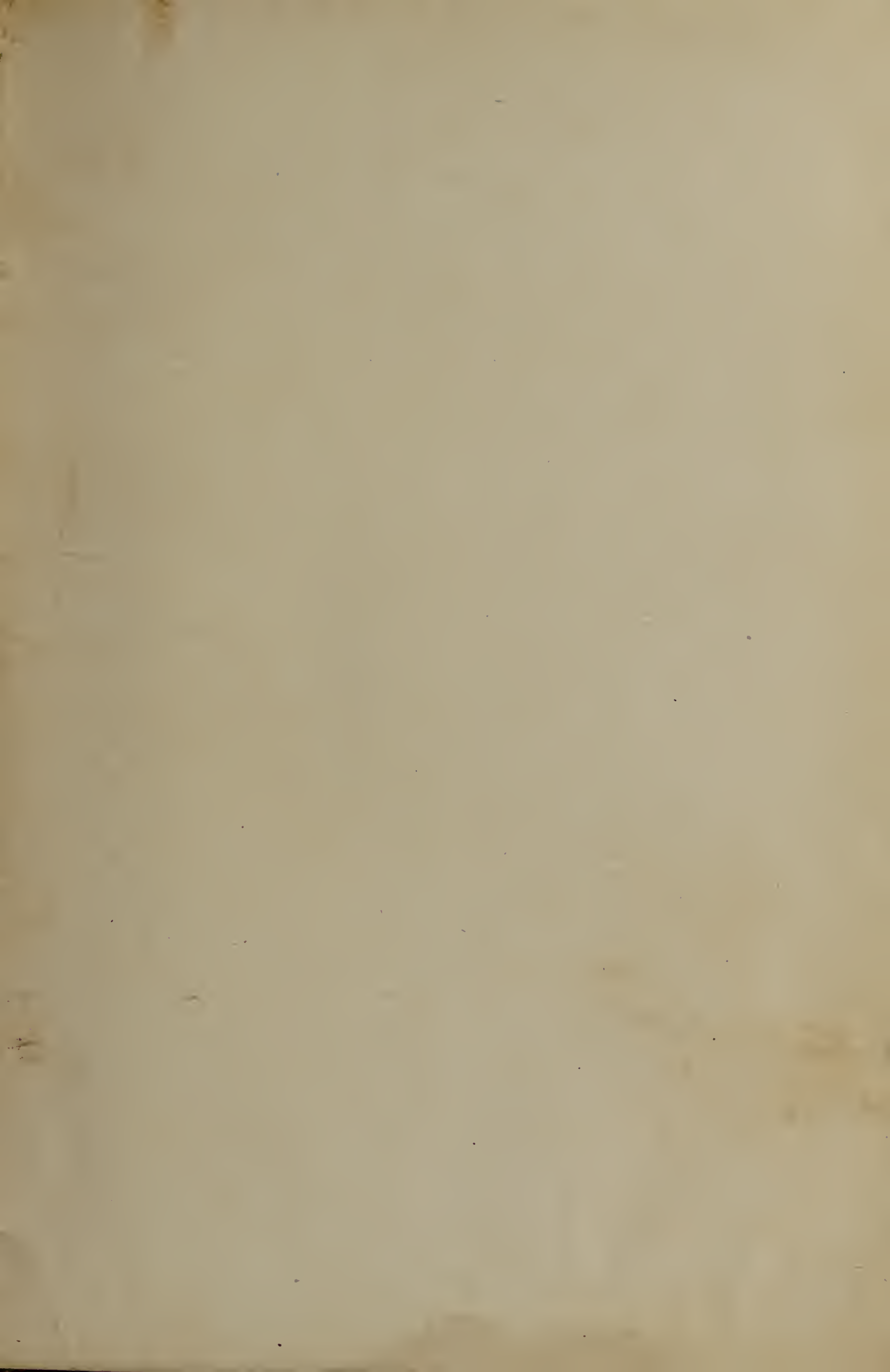
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